DOCUMENT RESUME

ED 427 206 CE 078 107

AUTHOR	Wills, Joan L., Ed.
TITLE	Employers Talk about Building a School-to-Work System: Voices from the Field.
INSTITUTION	American Youth Policy Forum, Washington, DC.; Institute for Educational Leadership, Washington, DC. Center for Workforce Development.
ISBN	ISBN-1-887031-61-8
PUB DATE	1998-00-00
NOTE	103p.
AVAILABLE FROM	American Youth Policy Forum, 1836 Jefferson Place, NW, Washington, DC 20036-2505 ($10).
PUB TYPE	Reports - Research (143)
EDRS PRICE	MF01/PC05 Plus Postage.
DESCRIPTORS	Articulation (Education); Basic Skills; Comparative Analysis; Curriculum Development; *Education Work Relationship; Educational Improvement; *Educational Needs; Educational Policy; Educational Practices; Educational Trends; *Employer Attitudes; Essays; Federal Legislation; Foreign Countries; High Schools; Labor Needs; Needs Assessment; Partnerships in Education; Public Policy; *School Business Relationship; State of the Art Reviews; Strategic Planning; *Systems Approach; Trend Analysis; Two Year Colleges; *Vocational Education; Work Experience Programs
IDENTIFIERS	Europe; *School to Work Opportunities Act 1994; United States

ABSTRACT

This document contains background information on the school-to-work (STW) movement and 20 essays written by employers and intermediaries involved in STW program planning and implementation. Four points are highlighted: (1) it takes time to assemble an STW system; (2) the number of students participating in structured work-based learning remains small; (3) STW marketing is required; and (4) brokers between education/training and employers are needed. The following essays are included: "'Skilled Workers Needed" (Rene Craft); "Stepping Forward and Stepping Up to New Roles" (Lee Doyle); "'Sheer Necessity'" (George H. Kaye); "School-to-Careers: A New Revolution" (Larry Stupski); "Clear Links to Core Business Goals: A Necessity!" (Dave Johnson); "Sustainable Strategy for the Next Century" (Renee Lerche; Mike Schmidt); "Building New Bridges" (Michael Bzdak); "Trust Is the Elixir of Commitment" (Lisa Goldberg); "WOMP: Give Them Something to Talk About" (Rogercarole Rogers); "A Sustained and Evolving Commitment" (Sharon Knotts Green); "Links in the Education Chain" (Jere Hess); "Merging the European and American Systems" (John P. Tobin); "Giving Students a Solid Start" (Kevin Healey); "Building a Support Structure Takes Time" (Mary Dodd); "The Connection for All Students" (William Diehl); "Spanning a Revolution: Can It Happen?" (Robert Gordon); "Developing a Sequence of Actions" (Jeffrey M. Vega); "New Service Innovations Are Required" (Mimi Bushman); "Block by Block Builds Success" (Neil Sullivan); and "Why School Intermediaries Are Needed" (William Bloomfield). (MN)

ED 427 206

EMPLOYERS TALK ABOUT BUILDING A SCHOOL-TO-WORK SYSTEM:

VOICES FROM THE FIELD

JOAN L. WILLS, EDITOR

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY
L P Gasson
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
1

Center for Workforce Development
Institute for Educational Leadership
and
American Youth Policy Forum

CE078107

BEST COPY AVAILABLE

2

ABOUT THE PUBLISHERS

The **American Youth Policy Forum** (AYPF) is a nonprofit professional development organization providing learning opportunities for policymakers working on youth issues at the local, state and national levels. The goal of our nonpartisan forum is to provide participants with information, insights and networks to help them in their work on education, transition to employment, national and community service and related policies and practices contributing to the development of healthy and successful young people. Since 1993, AYPF has conducted 35 to 40 events each year, including lunchtime forums and out-of-town field trips with a thematic focus. AYPF also arranges one overseas study mission each year. Additional information about AYPF and our inexpensive and practical policy reports can be found at (http://www.aypf.org).

The **Center for Workforce Development** (CWD) helps leaders in both the public and private sectors to build bridges that connect individuals with learning institutions and the workplace. The focus is on the ties that link the worker, the school or training institutions and the workplace and on the ties that promote the types of learning organizations that are needed to increase the productivity of the nation's workforce. CWD is involved in qualitative research and evaluation studies on key policy, program and education and training service delivery issues at the local, state and national levels, as well as the provision of technical assistance to federal, state and local governments, businesses and nonprofit organizations. Additional information on CWD can be obtained at (http://www.iel.org/programs/cwd.html).

This publication is not copyrighted and may be freely quoted without permission, provided the source is identified as:

Employers Talk About Building a School-to-Work System: Voices from the Field

Washington, DC:
American Youth Policy Forum and Center for Workforce Development, 1998

ISBN: 1-887031-61-8

Additional copies may be ordered for $10.00 prepaid, including postage and handling, from:

American Youth Policy Forum
1836 Jefferson Place, NW
Washington, DC 20036-2505
http://www.aypf.org

The activities of the American Youth Policy Forum are made possible by the support of a consortium of philanthropic foundations: Pew Charitable Trusts, Charles S. Mott Foundation, W. K. Kellogg Foundation, Ford Foundation and General Electric Fund.

Layout by Susan Kim.

EMPLOYERS TALK ABOUT BUILDING A SCHOOL-TO-WORK SYSTEM:

VOICES FROM THE FIELD

PREFACE

The School-to-Work Opportunities Act (STWOA) of 1994 was designed to establish a national framework for statewide systems of business and education partnerships to (1) help students make the vital connection between what they learn in school and in the workplace and (2) prepare them for careers and advanced education and training. States and local partnerships were provided venture capital by the federal government to design these systems and pull together existing models and efforts to create a coherent set of activities and experiences. STWOA will sunset on October 1, 2001, at which time federal school-to-work funds will terminate and school-to-work systems are expected to be institutionalized (and supported) at the state and local levels. Implicit in STWOA is that other, more permanent and targeted sources of federal funds, such as those for vocational education and employment and training, will be redirected to support these systems.

Among the most important elements of STWOA is the provision for employers, educational institutions, and state and local governments to build more effective bridges between schools and the workplace. To realize the full intent and effectiveness of school-to-work, these linkages must strengthen and continue beyond the sunset provisions of the law and rely not on federal funds, but on the long-range commitment of the partners. Many partnerships, however, are still fragile and, unless effort is made to ensure that they take root, they may disintegrate before their potential is fulfilled. Unfortunately, experience has taught us that new initiatives, no matter how worthy, often disappear when the necessary infrastructure has not had time to mature and when targeted federal funds disappear.

As STWOA approaches its half-way point, the time is appropriate to:

- gauge where we are in the process of developing a system and institutionalizing school-to-work strategies and principles;
- take stock of what we have learned about the challenges of taking business and education partnerships to scale – beyond the successful models and individual initiatives that we know make a difference in the motivation and success of young people;
- listen to the lessons from business leaders and employer intermediaries in the field; and
- think about "next steps" in the future of school-to-work as current legislation expires in 2001.

Who better to lend their voices and perspectives about creating a workforce development infrastructure in our communities and states than representatives of the employer community – the companies and intermediaries* actively involved with students, teachers, schools and businesses? Because we value their experiences, we asked them and they graciously shared their thoughts and lessons about overcoming problems, finding solutions to developing meaningful partnerships and creating successful connecting activities that span the responsibilities and interests of the numerous partners engaged in school-to-work.

This report is divided into three parts. Part I begins with an "Introduction" describing the history and context of issues leading to the creation of STWOA. It is followed by a "Summary of the Lessons" that emerge from the "Voices From the Field" and concludes with "Recommendations for 2001 and Beyond." Part II and Part III are compilations of short essays: "Voices of Employers" and "Voices of Intermediaries." They provide individual accounts from communities and companies all across the country. Each is thoughtful and unique. None suggests creating a school-to-work system in the U.S. is easy or guaranteed. As their collective stories unfold, however, we sense a "can do" attitude and support for the future of business involvement in school-to-work.

Joan Wills
Center for Workforce Development
Institute for Educational Leadership

Samuel Halperin and Glenda Partee
American Youth Policy Forum

* Intermediaries have been recognized as critical players in building a new system of relationships and responsibilities. Whether local chambers of commerce, private industry councils or community-based organizations, their role is to provide the necessary "glue" to hold partnerships together, often engaging in activities such as making initial connections with businesses, matching students with employers and helping solve problems or miscommunications that may develop.

ACKNOWLEDGEMENTS

This report reflects the work of many hands. The assistance received from each of the business and intermediary organization leaders who took time to reflect about the lessons learned is greatly appreciated. Their knowledge is a result of personal involvement in helping to build opportunities for students and teachers to understand the changing world of work. All gave generously of their time and this publication would not exist without their contributions.

A special note of thanks goes to Barbara Kaufmann and Sharon Davis for assisting me in numerous ways throughout the process of soliciting authors and collecting and organizing the materials. Their help was invaluable.

Samuel Halperin continues to be a respected counselor and supporter (and oft times editor) to me as well as many individuals throughout the country involved in trying to make the workforce preparation puzzle more easily understood and useful for our youth. Sam never loses sight of what is most important – making the world better for the generations to come. His co-director Glenda Partee was a joy to work with from the conceptualization to the production phases of this effort. Her help in reviewing the Voices papers sharpened the collective lessons section. Her editorial support and keen insight are much appreciated. Other American Youth Policy Forum staff, Vincent Spera and Joseph Sena, were especially helpful in reviewing the final draft of the document and making helpful suggestions.

This report will not answer all of the critics' concerns about the involvement of employers in the transition from school to work. It should, however, help arrest unwarranted fears – that the opportunities contained in the school-to-work legislation will result in a reduction of emphasis on high academic standards, limited opportunities for young people to pursue higher education or loss of control over the schools by the proper authorities. To the contrary, the report describes many of the benefits and expanded opportunities now available to our young people. The most important lesson I gleaned from the stories told by each of the authors is how many people have become engaged in building new bridges between generations and how many people have given generously of their time to assist students in preparing for life beyond the schoolhouse doors.

Joan L. Wills
Editor

TABLE OF CONTENTS
VOICES FROM THE FIELD

Executive Summary: Lessons from the Field ..... *i*

Introduction: Background of the School-to-Work Movement ..... *iv*

Lessons Learned ..... *vii*

Recommendations for 2001 and Beyond ..... *ix*

VOICES OF EMPLOYERS

Advanced Micro Devices 1
"SKILLED WORKERS NEEDED"
by Rene Craft

BellSouth 3
STEPPING FORWARD AND STEPPING UP TO NEW ROLES
by Lee Doyle

Partners HealthCare Systems, Inc. 8
"SHEER NECESSITY"
by George H. Kaye

Charles Schwab & Company, Inc. 11
SCHOOL-TO-CAREERS: A NEW REVOLUTION
by Larry Stupski

Coors Brewing Company 15
CLEAR LINKS TO CORE BUSINESS GOALS: A NECESSITY!
by Dave Johnson

Ford Motor Company 17
SUSTAINABLE STRATEGY FOR THE NEXT CENTURY
by Renee Lerche and Mike Schmidt

Johnson & Johnson 21
BUILDING NEW BRIDGES
by Michael Bzdak

Exempla Health/Lutheran Medical Center 24
TRUST IS THE ELIXIR OF COMMITMENT
by Lisa Goldberg

McDonald's USA 29
WOMP: GIVE THEM SOMETHING TO TALK ABOUT
by Rogercarole Rogers

Motorola Semiconductor Products 33
A SUSTAINED AND EVOLVING COMMITMENT
by Sharon Knotts Green

Peavey Electronics Corporation 36
LINKS IN THE EDUCATION CHAIN
by Jere Hess

Siemens Corporation 42
MERGING THE EUROPEAN AND AMERICAN SYSTEMS
by John P. Tobin

UNUM Corporation 46
GIVING STUDENTS A SOLID START
by Kevin Healey

VOICES OF INTERMEDIARIES

Capital Area Training Foundation 51
BUILDING A SUPPORT STRUCTURE TAKES TIME
by Mary Dodd

The Corporation for Business, Work and Learning 54
THE CONNECTION FOR ALL STUDENTS
by William Diehl

Morris/Sussex/Warren School-to-Work Consortium 60
SPANNING A REVOLUTION: CAN IT HAPPEN?
by Robert Gordon

New Brunswick Tomorrow 64
DEVELOPING A SEQUENCE OF ACTIONS
by Jeffrey M. Vega

Oregon Business Council 68
NEW SERVICE INNOVATIONS ARE REQUIRED
by Mimi Bushman

Boston Private Industry Council 75
BLOCK BY BLOCK BUILDS SUCCESS
by Neil Sullivan

Civic Strategies/School & Main 79
WHY SCHOOL INTERMEDIARIES ARE NEEDED
by William Bloomfield

EXECUTIVE SUMMARY
LESSONS FROM THE FIELD

The following insights were gleaned from the essays of employers and intermediaries on the issues of working with youth and teachers, building a system of school-to-work and changing business practices.

Working with Youth

- Career awareness and career exploration activities such as employer visits to classrooms, group visits to workplaces and short-term job shadowing are relatively easy activities to implement in helping young people learn about the world of work. These efforts represent good first steps on the part of employers, but work-based learning opportunities of longer duration are needed. Creating these opportunities requires additional time and changes within the current structure of businesses and schools.

- Most employers are willing to participate in school-to-work efforts that involve all youth – not just the "best in class" or a subset of the population. If clear expectations are set, many of the most at-risk youth are capable of being productive workers and successful in school as a result of their school-to-work participation.

- Employers cite the following benefits to student involvement in school-to-work: reduced school-leaving rates, improved grades and higher postsecondary-going rates. They feel that youth view them as credible sources of advice (e.g., "Keep your grades up." "Tardiness isn't rewarded and can get you fired.") capable of providing critical "signals" on getting and keeping a good position in a firm.

- Project-based learning is useful at both the worksite and in the classroom. For high school students, the most frequently mentioned and praised form of work-based learning involved projects requiring real work activities that could be easily connected to classroom work.

- Young people are the best salespeople for recruiting students to school-to-work. According to Rogercarole Rogers of McDonald's USA, "We've learned that participants with even one year's experience in the youth apprenticeship process make the best sales people for recruiting purposes. Educators have told us that their student apprentices 'walk tall.' They seem more connected, confident and mature" (pp. 29-32).

Working with Teachers

- Externships and other staff development efforts designed to provide teachers and guidance personnel with critical exposure to the world of work are considered among the most important beginning steps in developing meaningful school-to-work partnerships.

- Bridging the cultural gap between employers and education professionals is essential. This can be done best when opportunities are available to brainstorm solutions to address key "sticking point issues," such as how to create supportive school and work schedules, meaningful assessments of student performance and appropriate forms of instruction or curriculum.

- State and local school districts should review policies regarding professional development and opportunities for teachers and counselors to participate in planning activities. Employers and

intermediaries need points of contact within school districts. These points of contact should have authority to influence policy supporting effective externship and planning opportunities and have credibility with teachers and their unions.

Building a System

- It is important to take time initially to develop explicit goals for the school-to-work partnership and to agree upon measures for determining its progress and effectiveness. Employers and intermediaries found that time and trust were strained by not being explicit about evaluation criteria up front.

- Intermediary organizations work to expand the capacity and range of the partnership and are trusted by both the schools and businesses. Local intermediaries often provide critical administrative, planning and marketing functions and student supports such as job matching and counseling. In some cases, they even function as conduits for channeling student wages, thus obviating the necessity for placing students on employer payrolls.

- Using industry sectors (not occupations) to organize employer efforts generates the most buy-in from a wider array of firms. Intermediaries that make connections with industry-based trade associations have the capacity to tap into natural networks of employers to help develop work-based learning opportunities, develop common core curriculum for specific occupational clusters, such as for career academies, and advocate for the overall effort.

- Intermediary organizations are not naturally occurring. They must be grown along with other parts of the evolving system. STWOA's emphasis on establishing effective connecting activities has helped launch some promising efforts throughout the system, but skilled and experienced staff that respect the needs of employers, schools and students need opportunities to be trained for their roles.

- Intermediaries are needed at the national, state and local level, with each playing a supporting role to the other. National intermediaries, such as the National Employer Leadership Council (NELC) and industry organizations charged with developing skill standards, were often mentioned as helpful to employers. State organizations can help build networks across the state, find the "cheerleaders" and advocates in the business community and produce an array of "why and how" material for employers. Statewide intermediaries, such as the Oregon Business Council, have been able to conduct cost effective "scale analyses" that are useful for local partnerships and the state's business community. Intermediaries have been so successful in some communities that available work-based placements for students have gone unfilled.

- A career pathway framework with attendant career guidance information services is lacking. The career major requirement described in the legislation was not a particularly useful tool to help employers and intermediaries organize around meaningful occupational clusters.

- State and school "report cards" and other forms of public information and measures of accountability should include information about school-to-work activities. This is necessary if school-to-work is to be viewed and assessed as an integral part of education reform and student achievement.

Changing Business Practice

- Top corporate leadership support for school-to-work is needed. This message rang loud and clear throughout the essays of employers in this report. Employer-led marketing campaigns, such as those sponsored by the Oregon Business Council

and NELC, are needed to obtain and sustain this level of commitment.

- Specific processes and policies for interviewing, hiring, assimilating and assessing students are needed. Large corporations need a point person to manage the whole process and market the initiative inside the firm. In addition, many firms have to find new ways to classify student workers. Supervisors and managers functioning within departmental "head count caps" are often reluctant to hire a student who may be counted against "caps."

- Internal rewards or recognition for contributions made by employees to student or teacher programs are valuable. Several employers noted that an unanticipated side benefit of their involvement in school-to-work was improved employee morale among front line workers involved in these efforts.

- Higher benefits are accrued to the company and the community when corporate contributions become closely aligned with school-to-work initiatives. Several corporations have made it a policy to align their social giving with their business interests. As the school-to-work effort evolves, corporate involvement will continue to mix business interests with social responsibility.

- Firms of all sizes should start with summer or short-term programs and build up to more formal long-term training, such as youth apprenticeships and internships. Most firms have begun their school-to-work initiatives by starting small, either in one location or in one part of the plant. Moving to formal apprenticeship or long-term internships requires firms to make adjustments in the way they work with current employees and develop the needed work-based curriculum and rotation processes. Additionally, preparing mentors to work with the students takes practice.

Top corporate leadership support for school-to-work is needed. This message rang loud and clear throughout the essays in this report.

INTRODUCTION
BACKGROUND OF THE SCHOOL-TO-WORK MOVEMENT

During the 1980s, evidence emerged that training programs and schools were unable to meet the challenges of preparing the next generation for the realities of the new economy. An array of *ad hoc* national and state commissions and tasks forces identified problems and their causes and developed proposals to refocus government-supported education and training services. At the same time, researchers documented the changing nature of the workplace and the shifting demographic make-up of the workforce of the future. Common themes – driven by the employer community – began to emerge by the middle of the decade:

- basic education needed to include higher levels of problem solving, critical thinking skills, and the knowledge of information-age technologies;
- personal attributes of new workforce entrants, such as coming to work on time, taking responsibility for yourself and not using drugs needed to be strengthened;
- traditional distinctions between education and training needed to be re-thought;
- "employer-trusted credentials" were needed to inform the hiring process in the workplace because many education credentials had lost credibility;
- better and continuous communication systems between the classroom and the workplace were needed to establish a common understanding about the skill requirements of the workplace, how to share know-how between the public and private sectors regarding the content of work-related curriculum and how to improve the recruitment of student interns/workers;
- the unmanaged and uncoordinated proliferation of governmental programs had resulted in a plethora of education and training efforts as well as multiple and often conflicting expectations of the employer community; and
- young people in general had little or no concept about career opportunities in various industries and the approaches used within schools to expose young people to solid career information were often characterized as "hit-and-miss."

At about the same time, the education and training policy community had determined that a substantial retooling of academic and occupational preparation programs was urgently needed. Research, evaluations and experiences of practitioners began to generate another set of common themes:

- insufficient attention was being given to accommodating various student learning styles, and greater attention needed to be placed on designing contextual, applied or hands-on learning opportunities;
- students appreciate and absorb the lessons of becoming responsible adults if they are exposed to a work setting with a strong and caring mentor(s);
- clear expectations of what and why something needs to be learned is an important stimulus for all students;
- inadequate attention was being given to integrating academic and vocational curricula that are based on high quality standards and workplace requirements;
- professional staffs within school systems lacked an understanding of the changing needs of the workplace and how to use information-age technologies;
- incoherent programs of study were unnecessarily costing students, parents and employers time and money, suggesting that better alignment of course sequences and the creation of logical pathways between high schools and postsecondary opportunities was needed;

- mechanisms for awarding student credits, particularly in the articulation between different levels of education institutions, needed to be addressed;
- career guidance and information systems were inadequate, required revision and needed to be introduced earlier in the schooling process;
- the proliferation of federal and state funding streams and programs – many with similar goals yet different operating rules – proved to be more of an impediment than a support to local and state education and training policymakers attempting to redesign workforce preparation programs in concert with the employer community; and
- all students, not just a select part of the student population, should be exposed to the realities of the "new" technology-driven workplace.

These issues and themes created a public discussion that converged during the legislative crafting of what became the School-to-Work Opportunities Act of 1994 (STWOA) and resulted in many of its foundation principles, i.e., the integration of academic and occupational learning, linkages between school- and work-based learning and the need for cross-sector coordinating activities. Whereas the Clinton Administration had originally proposed a "new program" piece of legislation that centered on developing youth apprenticeship projects around the country, the push and consensus from the education and training communities was for a much broader effort – not another "program" but an effort to effect systems change.

The initiative also broke new ground in the intergovernmental grant-in-aid system by not automatically providing a formula grant to each state but instead creating a planning opportunity for all states and a staged roll-out strategy for implementation. These innovative features were in addition to the overarching challenge embedded in the legislation – increasing the role of employers in the young person's transition from school to the workplace.

A particularly optimistic feature of the legislation was the assumption that states and localities could build upon the existing elements of a system, create a sustainable redirection of public and private resources and practices in the preparation of the workforce, address the aforementioned issues, and "go to scale" with a functioning system of school-to-work transition in all the states – all within a five-year period.

In spite of the daunting challenge this created, the opportunity was given to:

- shorten the preparation time for students to become proficient and career-directed student/workers;
- blend and focus the academic and contextual learning processes for career preparation for all students, regardless of the setting where knowledge and skills were attained;
- establish value-added occupational credentials for use by both workers and employers;
- create more efficient mechanisms for employers to communicate knowledge requirements to educators and other employers; and
- enhance the economic competitiveness of communities and their public and private enterprises.

A mammoth effort was required. State-wide goals, benchmarks of progress and process, implementation plans that crossed traditional institutional and funding stream boundaries and new forms of accountability all needed to be developed. New ways of organizing working partnerships with employer networks also had to be established to:

- promote a range of age- and stage-appropriate work-based learning opportunities;

- establish new forms of student screening, recruitment and other support services for employers of all sizes and industries;
- develop new and better communication channels among educators and industry groups;
- create career-oriented programs of study, including information on all aspects of the industry;
- establish employer-respected credentials based on performance assessments; and
- establish a cost-efficient, technically valid and reliable national voluntary assessment system.

Because these networks did not exist in most communities, it was necessary to build them from the ground up – a substantial task for an appropriation of no more than $400 million a year.

The notion of "going to scale" represented an enormous challenge. School-to-work legislative goals include providing all young people with an array of work-related experiences, including the opportunity to receive academic credit for time spent in the workplace. As a result, one of the most formidable challenges was building the capacity within the employer community to (1) provide work-based learning opportunities directly connected to the schooling process for young people and (2) find ways to participate with other parts of the education and training community.

We are now far enough into the implementation of STWOA to see the initial development of this capacity, especially in the formation of new organizations and alliances among companies, educational institutions, governmental agencies and employer organizations. For example, the National Employer Leadership Council (NELC) was established by employers interested in helping promote and develop a better workforce. Among their activities is the Employer Participation Model (EPM), which helps employers make choices about participation in school-to-work and addresses areas of concern such as: (1) working with youth and teachers, (2) assisting in the building of a system, and (3) changing business practices. (Information is available on NELC through its Web page – http://www.nelc.org).

We are also far enough into the implementation effort to begin to document the benefits and effectiveness of these collaborative efforts for students who receive the value-added education of school and employer resources and opportunities, on employers who participate in the development of their future workforce[1] and on communities that reap the benefits of a well-prepared and engaged citizenry.

So, what *do* employers and intermediaries tell us about their participation and experiences in helping to develop a school-to-work system? What have they learned? How can we use this information to support the transition of young people from school to careers and nurture the partnerships necessary to create a workforce development system in the United States? What are the next steps that national, state and local policymakers need to take to support the momentum of this effort?

[1] Among the benefits identified by employers that offer work-based learning to young people as part of a school-to-work program are: the value of the students' work, reduced training and recruitment costs, improved productivity of new workers, improved community relations, improved productivity and morale of incumbent workers and increased diversity of the workforce (Laurie J. Bassi, Theresa Feeley, John Hillmeyer and Jens Ludwig. *Learning and Earning: An Employers Look at School-to-Work Investments.* American Society for Training and Development, for the National Employer Leadership Council: Washington, DC, 1997.). Students also completed the routine work of more highly paid employees and covered for full-time employees when they took leave. Reduced training and recruitment costs resulted when companies hired students who had completed work-based learning, thus contributing to improved productivity and decreasing turnover rates. The ratio of cost to benefits varied among companies, with some receiving two to three dollars of value for every dollar spent on a work-based learning program.

Four overarching lessons emerge from the voices of employers and intermediaries represented in this report.

1. It takes more time than anticipated to put all the pieces of the system together.

Contributors consistently voiced the importance of time to build trust among the partners; establish common ground, a mutual vocabulary and measurable criteria for judging success; and integrate school-to-work activities with other aspects of education reform. School personnel are often concerned that school-to-work is just one more responsibility advanced on them by "outsiders." They need to be able to see and feel a sense of long-term commitment on the part of employers and other outsiders. These are necessary pre-conditions for partners to buy into the effort.

2. The number of students participating in structured work-based learning opportunities is still very small.

There is no commonly agreed upon definition of "going to scale." Does it mean providing school-to-work opportunities for all high school students? Junior and senior high school students? All high school students, plus two-year postsecondary students? Or all high school students, plus two- and four-year postsecondary students?

There is also no generally accepted way to define a structured work-based learning opportunity. Should it only include paid work, or should it include short- and long-term paid and unpaid experiences? Perhaps in the future, these issues will be resolved, but for now a general pattern of participation shows that most, even the largest, employers will only engage ten or fewer students at any one worksite in a paid experience.[2]

According to William Diehl of The Corporation for Business Work and Learning (CBWL), a Massachusetts school-to-work intermediary, "The major issue in providing work-based experiences is that of scale: given the available resources and employer partners, it is possible to provide short-term career exposure experiences to most students, but it is not possible to provide longer-term, rich work-based learning experiences to more than 15-25 percent of students" (pp. 54-59). These experiences underscore the fact that going to scale by serving all students will require substantially more capacity building within the employer community.

3. Marketing for the school-to-work effort is required within a company.

Teachers, parents, school board members, employees and employers need to learn why school-to-work is "different and better." Thoughtful marketing of school-to-work within firms and within the education community is essential.

According to Larry Stupski, Vice-Chair of Charles Schwab and company, "Initially we thought school-to-careers was such a great idea that it would sell itself. This doesn't happen until *after* managers start to work with high school students. Before, there can be misperceptions about the maturity and competence levels of students and the time commitment necessary to work with them. We have found that STC requires a four-part sell within a company like Schwab, including the CEO, Human Resources

[2] Evidence from a recently released national survey administered by the U.S. Bureau of the Census shows that of employers with at least 20 or more employees, at least 26 percent of the sampled establishments participate in school-to-work partnerships (secondary and two-year postsecondary schools included) (Institute for Research on Higher Education. *Bringing School-to-Work to Scale: What Employers Report.* University of Pennsylvania, in concert with the U.S. Bureau of the Census: Philadelphia, PA, 1997). The most frequent school-to-work activities included job shadowing, internships and mentoring. The least frequent activities involved smaller numbers of young people in apprenticeship-type opportunities.

director, manager and supervisor. The effort must be made at all levels to insure buy-in and sustainability of the initiative" (p. 11-14).

4. Intermediary organizations that serve as brokers between the education and training community and employers are needed.

Employers do not perceive or identify overwhelming barriers to participation in school-to-work. Collectively, however, they view the lack of "connective networks," primarily between the public and private sectors, as impediments to the success of school-to-work efforts. An example of a connective network, or intermediary, is BellSouth's use of the High Schools that Work initiative sponsored by the Southern Regional Education Board (SREB). BellSouth uses this initiative to help translate to school personnel the mathematic, scientific and communication skills required in the workplace. One of the key reasons BellSouth works with SREB is because it helps them reach into all nine states the corporation covers.

Networks of national, state and local employer-led intermediary organizations have been created and/or expanded. Among the types of intermediaries that employers find of valuable are: (1) local organizations providing direct service, such as in Austin, Texas, which organize industry cluster committees to help identify skill gaps for the occupations in that particular industry (e.g, health, construction, information technology) and solicit work-based learning opportunities within the industry, or in Boston where the Private Industry Council provides career counselors that serve as the bridge between the school and the workplace; (2) state-based intermediaries providing connections to wider education reform efforts and research and marketing support to employers, such as the Oregon Business Council, or the CBWL in Massachusetts, which provides support to communities across the state to help organize local intermediaries; and (3) national intermediaries, such as NELC, which provide general support to employers that specifically want to focus on school-to-work efforts, and those with an industry-specific focus involved in areas such as skill standards development and collaborative efforts among like businesses, such as the National Institute for Metalworking Standards.

RECOMMENDATIONS FOR 2001 AND BEYOND

The U.S. has a checkered history of fits and starts regarding federal legislation aimed at improving the quality of workforce preparation. As Americans, we are often impatient and want quick, "silver bullet" solutions to fix a problem. The lessons from the past 100 years suggest there are no silver bullets nor does changing complex human enterprises, such as education and training institutions, come easily or evenly. The enormity of the challenge to support a very different transitional system from the school into careers will become an unmet challenge if STWOA expires without considering what needs continuous support and what remains to be accomplished, including incorporating critical ingredients from this venture capital effort that heretofore had been missing.

STWOA was wisely constructed as a systems change endeavor. The lessons culled from the **Voices From the Field** recommend a set of tools or requirements that should remain in the legislative arsenal to ensure: (1) high quality educational opportunities and (2) cost effective and efficient ways to engage all of the stakeholders in making those opportunities a reality. Whether as components of stand-alone legislation or within broader workforce development legislation, the following elements should be preserved:

- **Serving "all students."** For the federal government (not state and local), the idea of allowing federal education and training funds to be spent under the rubric of universal coverage represents a break with the past, but it is a central tenant that needs to be continued as a transitional school-to-work system unfolds. This does not mean that employers or intermediary organizations did not recognize that many students have special needs but that more needs to be done to connect programs targeted to at-risk youth (both in and out of school) with school-to-work efforts.

- **Expanding the networks of intermediary organizations**. There is a need to cultivate and support such organizations. Many of the most respected, "honest broker" intermediary organizations were launched with foundation or special demonstration funds. To expand and improve these organizations will require more permanent and pervasive funding. There is also value in having national, state and local networks of such organizations centering at least some of their attention on the transition from school to the workplace.

- **Building and maintaining support systems for both employers and education and training providers will be an ongoing task**. A constant need will exist to:

  a. **Provide staff development opportunities for teachers, counselors and administrators to understand the needs of the "new economy " workplace and how to provide contextual learning opportunities for their students**.

  b. **Develop standards-driven and integrated (academic and occupational) instructional material for all levels of education institutions and work- or community-based training organizations**.

  c. **Generate processes that assess what individuals are able to do and that are linked to appropriate credentials**. This is an area that has been slow to develop and will continue to require attention.

  d. **Provide national or regional clearinghouses of "best practices" that can be tapped by employers, educators and others in the design of curricula, assessments and evaluations**.

This list represents a starting point for the discussions that need to take place at the national, state and local levels and among stakeholders involved in improving the transition from school to work for all young people. Because other federal or state funds cannot be easily directed to support the above functions, the issues listed help glue together pieces of federal authority and support for employment preparation and education. They represent minimal, yet "smart glue" dollars.

It would be unwise to assume that corporations can or should be expected to provide these smart glue dollars. Many of the corporations represented in this publication have used their own funds (showing exceptional commitment), generally from their foundation arms, to aide the overall effort, but most firms in America are not as well endowed. To rely on the "corporate citizen" motives of the largest firms in the country to build an improved national transitional system is both unfair to these employers and more importantly to those students and communities where a corporate headquarter or branch presence is non-existent.

One final concern involves how the effort at the national level would continue. The National School-to-Work Office, jointly managed and operated by the U.S. Departments of Labor and Education, has presented its own challenges to those involved. This is in part due to the need to find common ground about administrative and grant procedures. On a more substantive level, developing a sense of common "ownership" of the systems change agenda promised by the legislation has remained more illusive than desired. However, the value of this "neutral agent" or intermediary has been lauded by the states and localities and most certainly by the employers involved at the national level. The need for such a neutral agent will no doubt remain.

VOICES OF EMPLOYERS

"SKILLED WORKERS NEEDED"

by Rene Craft
Advanced Micro Devices

Today's Environment

The U.S. semiconductor industry is facing a major shortfall of skilled operators andtechnicians, which will directly impact Advanced Micro Device's (AMD) ability to remain globally competitive. Nationally, this shortfall is projected to reach 40,000 by the year 2002.

AMD is one of the largest companies in the U.S. semiconductor industry and is based in Sunnyvale, California. However, the majority of AMD's manufacturing takes place in Austin, Texas, where AMD is the fourth largest private employer with approximately 4,000 employees.

Competition for skilled technicians has increased dramatically as Austin has become a national hub of semiconductor manufacturing. It is estimated that there are as many as 1,000 current openings for technicians in the Austin area. These are challenging and well-paying jobs. At the same time, the number of students graduating nationally with two-year technical degrees has steadily declined, from 60,000 in 1982 to 42,000 in 1994.

Current hiring trends reveal that AMD is only able to find 25 percent of its technicians in the local job market. Thus, growing a pool of qualified talent from the local area makes sense both for the company and the community. One innovative approach was the creation of AMD's Accelerated Careers Electronics (ACE) initiative, an award-winning high school program that encourages students to pursue a career in semiconductor manufacturing.

What is ACE?

ACE is a collaborative workforce development effort between the Austin Independent School District, the Del Valle Independent School District, Austin Community College, Capital Area Training Foundation and AMD. Begun in 1995, the goals of the program are to increase awareness of and prepare students for careers in the high-tech industry.

Equally important, the program seeks to provide relevancy to help students make the important connection between what they are learning in the classroom and what goes on in the workplace. ACE students enrolled in the electronics curriculum are eligible to apply for paid summer internships at AMD.

One of the most important aspects of the ACE curriculum is the inclusion of "connecting" activities, including tours of the AMD site, guest speakers, industry videos/publications and various "show and tell" activities. In 1997, AMD discovered that many of the students studying the curriculum did not have a clear understanding of what the career entailed and its importance to the world economy. Therefore, the ACE partner organizations are enhancing the high school curriculum by adding an overview course on the semiconductor industry.

Although many college-bound students participate in ACE, the intent of the program is to serve as a feeder into the Semiconductor Manufacturing Technician Program at ACC. However, parental bias against two-year degrees and a general lack of understanding about careers in the industry often keep students off the community college track.

Clearly, a concerted marketing effort is needed to educate parents, counselors and students about career opportunities available with a local community college degree.

Recruitment

School counselors and parents play a major role in identifying students for the program. In its first year, ACE partner organizations noticed a direct correlation between the success of ACE students and their math abilities. Therefore, counselors began targeting students with strong math scores for inclusion in the program.

The Benefits to AMD

AMD's management team views ACE as a long-term workforce development effort that links directly into post-secondary education. Therefore, the shortest cycle time in which to develop a potential employee beginning in high school is four years. Because the program is only three years old, it will take more time to determine whether these efforts have improved AMD's ability to hire skilled technicians--the ultimate measure of success. As proof of AMD's commitment to the program, the company agreed to continue hiring interns in the summer of 1996 at a time of declining corporate profits, hiring freezes and layoffs.

In the short-term, however, the company benefits through its enhanced relationship with the local school districts and a more positive image within the local community.

Challenges for Continued Success

While the high-tech industry has grown dramatically in Austin, this problem is by no means a local issue. The visibility of this issue must be raised on all fronts. Companies need to understand the business costs of not taking action. Businesses and other organizations should be encouraged to open their doors to students willing to explore career options. One daunting aspect of these types of programs is the amount of human resources it takes to "shepherd" one student through the work world.

This approach is necessary to ensure an understanding of the task at hand and avoid behavioral issues. AMD provides an extensive "Charm School" to communicate workplace expectations to new students prior to the internship. This component was added after we experienced a larger than anticipated amount of behavioral complaints from supervisors with their interns. Throughout three summers the company has hosted students we have seen a higher than normal amount of HR issues. This is due in large part to the young age of the students (17-18) and the fact that for many this is their first exposure to the work environment. The time that each student requires in "hand holding" factors into reluctance by many companies to offer workplace internships.

Conclusion

ACE has been successful in large part due to the ability of AMD and other partners to work quickly to design a program addressing local workforce development needs. It is a win-win for the community, allowing schools, employers, students and their families to define those needs and create an action plan with little government interference. While AMD applauds the federal government for providing money to develop local partnerships, the company urges that future legislation in this area maintain the same degree of flexibility. Additional federal laws mandating workforce development would only serve to limit our ability to design, implement and adapt these local initiatives.

Rene Craft is a Senior Community Affairs Specialist at Advanced Micro Devices. As the community affairs liaison, she works with its neighbors in the nonprofit community, adjoining school districts, community colleges and almost any other group or person in Texas that wants to talk to "AMD." She is responsible for day-to-day operations of the company's $1 million corporate giving program and oversees AMD's community outreach through volunteer projects.

STEPPING FORWARD AND STEPPING UP TO NEW ROLES

by Lee Doyle
BellSouth

BellSouth is a telecommunications company headquartered in Atlanta, Georgia, with operations in nine southeastern states and seventeen countries on five continents. While its employee base has decreased its telephone operations in the states, its cellular and international operations have continued to grow rapidly. Through the work of the BellSouth Foundation and the personal leadership of Chairman John Clendenin, BellSouth has built a national reputation of strong support for systemic, educational reform. With community service as one of the five corporate values, communities and educators across the southeast identify BellSouth as a corporate champion for educational issues. In recent years Bell-South has developed strategies which align the focus of the community outreach efforts with the business need for a better prepared workforce.

BellSouth recognizes that school-to-work is good for business "because it's good business to have strong relations with key suppliers." We know BellSouth cannot compete in the future without well prepared workers and we have no intention of opening our own schools. Our greatest "value added" is to help schools understand both today's and tomorrow's requirements of the workplace. Because we cannot achieve our business goals for growth, continuing opportunities for employment and lifelong learning without highly skilled employees, we must insert our standards and requirements into the education supply chain. For us, skilled employees and competitive costs are closely linked. Staying competitive means that we must rely on the public education system to teach core skills. Therefore, partnering with educators as our supplier is fundamental to our success.

What BellSouth Did

In 1994 BellSouth made a commitment to better align our resources to address the central issue of workforce preparedness. This effort reached across employee volunteerism, executive leadership and anticipation, advertising resources and some of our philanthropy. For a full description of the grant making activities of the Foundation and our large investment in our nine southeastern states, see our web site (www.bellsouthcorp.com/bsf).

There are several strategies that have helped us tighten the focus of our community outreach in order to align corporate investments of time and dollars with the needs of our business for a more prepared workforce. These strategies include:

- ***Seek to match employer resources to the needs of the education system.*** *Do this by thinking analytically about what unique resources the employer can supply to the partnership to meet needs or demands that are unmet on the education side of the partnership.*

  Example: At BellSouth we frequently ask, "Is this request something a garden club could do or is it something that requires work experience with a high-tech company?" This question helps us make decisions about how we can best use our resources. On a small scale, it helps us decide to provide judges for science fairs rather than provide chaperones for field

trips. On a much larger scale, in 1996 we identified the national NET DAY movement for wiring schools for the Internet as an activity to which we could contribute our technology expertise and facilitate the use of our services. By taking an early leadership role in the southeast for the implementation of NET DAY, we saw an opportunity to align our resources, technology, philanthropy and volunteer service all for the goal of wiring 4,000 schools in our region.

- ***Enhance existing programs to meet defined needs rather than start all over and disconnect from existing supporters.*** *It is wiser to use TQM techniques for continuous improvement to redirect mobilized resources than to begin new initiatives.*

  Example: At BellSouth, we invested in support materials for job shadowing because many of our small volunteer programs brought children into our worksite. We partnered with Jobs for the Future to develop a definitive guidebook that identified specific responsibilities and activities for students, teachers and employees. We upgraded this program by marketing it as Groundhog Day, encouraging our employees to volunteer during the week of February 2, 1997 as a groundhog and have a student shadow. The collateral materials included promotional posters, groundhog pins and media kits that made this event more newsworthy than earlier events. We were able to grow participation from 60 pairs (student and employee) to more than 1,250 pairs in a single year and now we are working with communities in several states to have metro wide programs in 1998 which will engage multiple employers.

- ***Provide direction to volunteers.*** *We knew that our volunteer resources were both broad and deep. In our nine southeastern states, we have more than 100,000 BellSouth Pioneers, members of the nation's largest industry-related volunteer organization, Telephone Pioneers of America. In 1996, their volunteer service exceeded 11 million hours.*

  Example: We sought ways to align volunteer activities with our corporate interests. As a result, in the last three years an increasing percentage of Pioneer service hours have gone toward education programs. We communicated to our volunteers our goal of "a closer link between learning and earning" by investing staff resources in the development of guidelines and collateral materials.

- ***Sharpen your focus as a way to make the sum exceed the parts of your outreach programs.***

  Example: We have focused on demonstrating the link between learning and earning, drawing applications from the ubiquitous telecommunications industry. To communicate the skills needed in high-tech service industries to students and teachers, we have written publications, designed classroom programs and internships for both students and teachers and worked on curriculum integration at multiple levels. We worked with Scholastic, Inc. to publish "Hook-Up," a publication that provides middle school students and teachers with explicit descriptions of the types of jobs in our industry, the skills needed for these jobs and the salary ranges for these jobs. More than 100,000 copies have been distributed via 1-800-631-1586.

- ***Work collegially to leverage innovation and change.*** *Employers must learn from and share with each other if our goal of lasting change is to be realized.*

  Example: BellSouth was a founding member of the National Employer Leadership Council (NELC). Early on, employers identified a serious need for

articulating the roles they were asked to fulfill in building an effective school-to-Work system. The member companies created the Employer Participation Model (EPM) and put it on their web page (www.nelc.org) so that all employers and educators would have the model that identifies 56 distinct initiatives that employers can embrace in four specific areas. In addition to defining these activities, NELC also developed a Resource Guide that identifies employers' best practices for each of the 56 activities and has sponsored definitive research on the return on investment of school-to-work initiatives in eight companies.

- ***Recognize and respect the educator as an equal***. *Employers do not have the skills and experience necessary to educate children – teachers do.*

  Example: Whenever we produce materials for use in the classroom, BellSouth engages educators to participate in the design. For broader audiences we also seek the advice of teachers. They were our consultants for the Education Gateway on our Internet service and helped design the user friendly index to education topics to allow better access by teachers, students and parents.

What BellSouth has Learned

BellSouth has learned much from the students, teachers and employees participating in our initiatives across the nine southeastern states. Some of the lessons have come easily, while others have taken persistent analysis at both the school site and worksite. Lessons have been gleaned from our BellSouth Foundation grantees, our colleague employers and many of our volunteers. But no matter where we learn, we have made communicating our lessons a high priority.

Continuing this tradition, let me share our current priorities which have evolved from lessons learned about how an employer can best impact systemic reform.

Our current thinking identifies four priorities:

- systemic efforts will be our first priority;
- programmatic efforts must be focused more tightly;
- the employer role needs more clarity and an infrastructure of support; and
- intermediaries are required for creating and sustaining change.

Systemic efforts will be our first priority

How do we define "systemic"? As an employer with large employee populations in many states, we feel compelled to direct our investments where we have confidence that significant change can be initiated and sustained. To achieve this goal, we need to influence a wide range of decisions, from corporate board membership roles and the guidelines for the BellSouth Foundation's grants to our choice of programs for volunteer participation.

Our experiences tell us that systemic change cannot come without addressing fundamental "building blocks" such as assessments, curriculum and instructional strategies. These elements must be prioritized within the education community and supported by the public. This support includes the philosophical commitment as well as support for the fiscal resources required. Only then is it even possible for systemic changes to occur — and then it is still difficult at best. But it is impossible without consensus.

Programmatic efforts must be tightly focused.

Large systemic change can also be fostered at the program level and, thus, we realized that we must give more focus to our programs that engage both students and teachers directly. We narrowed our scope and decided to support those efforts which contribute directly to building capacity for change, both with students and teachers. We claimed for ourselves the role of advocacy for teachers

who want and need experiences that help them understand the skill requirements in industry today. We believe that teachers are the most effective "agents of change" and that investing in their professional development is both strategic and tactical. The impact of one teacher experience is exponential to the value of one student workplace experience. Thus, we encourage the funding and development of teacher internship programs across our region and among our employer colleagues. Other program investments for educators include leadership training and the redesign of schools of teacher education.

BellSouth's support for teachers in the workplace was raised to a new level in February, 1997 when we announced a grant totaling almost $1 million. Designed to fund teacher externships for a maximum of nine school districts, the grant requires that the district initiative include a team of curriculum and teaching staff for the workplace experiences. The grant recognizes that curriculum change is the driver of education reform and that teachers must be offered staff development opportunities in order to bring direct workplace experience to their instruction in the classrooms. Most grantees used the funds to support summer internships across a wide range of models.

For students, we support programs that strengthen the link between earning and learning. With our focus on middle schools, we believe that job shadowing and mentoring are two effective programmatic approaches. Thus, we are expanding our Groundhog Day shadowing program to engage many more employees and more sites; in addition, we are supporting several communities who want to make the program available in all middle schools.

For seven years we have supported a variety of mentoring programs. In the more sophisticated ones, we developed materials to recruit and train employees to serve as role models, particularly for inner-city youth. As the programs have matured, we focused on developing a corporate model as opposed to a school- or community-based mentoring program because this enabled us to leverage our lessons learned and to share the best practices. This corporate model offers access to:

- a wealth of lessons learned across many communities;
- large numbers of employees and mentors housed in just a few locations;
- employees in their own environment, which increases participation;
- corporate communication networks for contacting volunteers; and
- corporate resources such as vans, graphic and printing services and training talent.

This year we have entered into an agreement with national Big Brothers/Big Sisters to develop a plan for taking over the administration of this program.

The employer role needs more clarity and an infrastructure of support

EPM, published by NELC, defines 56 specific initiatives for employers to participate in business-education activities. However, even in these 56 areas the role and expectations of employers are not always sufficiently detailed to facilitate good decisions by the willing employer.

If significantly larger numbers of employers are going to be engaged in school-to-work, employers need technical assistance designed by and delivered by other employers. This detail and clarity are frequently the value added by intermediaries or third parties working with multiple employers.

Intermediaries are required for creating and sustaining change

BellSouth recognizes and supports the need for intermediaries who can provide the

interface needed between employers and *educational institutions who can bring about* lasting change. We believe that intermediaries are necessary to help facilitate opening the workplace to larger numbers of students and teachers.

Intermediaries build capacity in the workplace by defining roles, resource requirements and processes. Their talent and contributions are transferable across communities, although their focus and leadership must be very customized to the local economy.

Many large employers like BellSouth feel they cannot take the lead in the creation of intermediaries in each community or region where they have employees. Thus, in increasing numbers, large employers are turning to regional/national alliances to best leverage their resources and lessons learned.

At BellSouth, the organizations we see as intermediaries range from educational groups such as the Southern Regional Education Board and the American Association of Community Colleges, to the employer organization NELC, to the national human services delivery agency, Big Brothers, Big Sisters. We are looking for similar outcomes from each of these relationships: to leverage best practices and minimize development and overhead expenses.

Conclusion

We know that partnering takes time and we must invest more time with our education partners at the planning table when we are planning for new worksites, new technology, and new work processes. Educators cannot meet our needs if they do not know them. We have been humbled at BellSouth and admit that we are not as good as we need to be at sharing information with the education community in a way which enables them to translate our changing needs into curriculum and instruction. We have learned much about how to best use our workplaces as a learning *lab for teachers first, rather than students first,* because teachers are universally welcomed in the workplace. Teachers are viewed as "very low maintenance" colleagues who work independently and can quickly identify a plethora of opportunities to integrate their work-based experiences into their classroom curriculum.

Ourselves

BellSouth will always engage in a wide spectrum of activities because we have a large employee body, both active and retired, who are committed to serving the communities in which they live and work. In order to maximize our contribution, we must work to align our philanthropy, leadership and volunteerism. We will continue to support our volunteers with strong collateral materials that equip them to foster higher academic achievement wherever they go. These materials need to "link learning to earning" in concrete ways, by identifying the skills and knowledge required in the world of work.

We are hopeful that focusing our resources will help BellSouth contribute to the systemic reform of our national education system and, in turn, to developing a national workforce development system. We make these investments because it is important to our business that the future pool of candidates for our jobs be more competitive on a global standard.

Lee Doyle is the Director of Corporate Affairs for BellSouth. In her current position, Ms. Doyle has developed the school-to-work strategies which have helped BellSouth better align their broad contributions to meet their business needs. In addition, she serves on the Advisory Council to the National School-to-Work Office, the Managing Committee of NELC and the Board of Directors of the American Society for Training and Development.

"SHEER NECESSITY"

by George H. Kaye
Partners HealthCare Systems Inc.

Our nation's competitive success in the 21st century will be determined by the creative and analytical capabilities of its workforce. Substituting brawn for brains will count far less than it has in the past. Those parts of the world where the citizenry can think for itself and make rational decisions about how various tasks are completed will be very highly valued by business.

The service industry will dominate the future economic landscape in much the same way manufacturing firms did during the first half of this century. The new order will require employees who possess problem solving abilities to work in fields such as accounting, finance, marketing, computer software, environmental consulting and health care.

What makes this challenge so great is that the requirements for future success are changing just as we are confronting the fact that our educational system is not meeting its most fundamental goals, such as ensuring that high school graduates can read and write.

In the fall of 1991, 88 Boston high school students embarked on a new kind of educational journey, a journey called Project ProTech, which has now touched the lives of more than 800 students in the Boston Public School System. Health care has been the pioneering industry in developing this newly created youth apprenticeship program for allied health careers.

"Sheer necessity" drove us to this point. In the late 1980s the Boston health care community was facing a severe shortage of trained technical help. We needed radiographers, medical technicians and medical secretaries. The public schools were not producing graduates that were interested or could be trained in technical fields. They did not have maturity, the right attitude, or the skills. Mentorships, internships, and job shadowing opportunities existed, but were superficial. We did not need 500 programs — we needed fundamental change.

Under the joint leadership of Emmanuel Berger, Vice President for Human Resources at New England Medical Center and myself, a coalition of six hospitals (Boston City Hospital, New England Baptist Hospital, New England Deaconness Hospital, St. Elizabeth's Hospital, Brigham and Women's Hospital (BWH) and the Massachusetts General Hospital (MGH)) designed and implemented what is now a very successful school-to-career program.

When Partners HealthCare System, Inc. was established in 1994 to oversee the affiliation of the Brigham and Women's Hospital and the Massachusetts General Hospital and to create an integrated health care delivery system, the ProTech Program became a Partner initiative and a proving ground where interested students could successfully pursue health care careers. Between the two stellar institutions of BWH and the MGH, and another hospital within the system, Spaulding Rehabilitation Center, we presently have 94 ProTech Students.

The Challenges and Promising Practices

Unlike traditional vocational education programs that offer last-ditch alternatives for the "non-college-bound," ProTech's "two-plus"

design (spanning two years of high school and two years of postsecondary education) opens up a range of opportunities. From these opportunities and our experiences, we have learned the following lessons:

- **The demands of the worksite and of present day business world technology challenge the students — and they meet that challenge**.

  First, they achieve and seek higher level courses in schools. Second, they become valued well-trained employees and third, they are motivated to aspire to a higher level of employment/education. We recruit inner city students with "C" averages, not the superstars, but they become superstars in their own right. In 1995, all 85 of our school-to-career high school graduates went to college. The old paradigm that these kids cannot do it is wrong. With the right stimulation and motivation, they *can* and will.

- **Each student needs to be matched with a mentor/supervisor**.

  This business world of ours is so foreign to the young adults who enter it that they need expert and caring guides. Many of our students come from families that cannot offer the support needed to help these students progress to higher levels of education. This is where the mentor and/or supervisor becomes so vital.

  In the beginning, we made the mistake of not including the educators and teachers in the design phase of the process. We learned the hard way that teachers are integral to our developing the correct curricula. We also learned that we posed a huge threat to them.

- **Schools are extremely hierarchical and tradition bound**.

  We, the business community, an unknown quantity, came through the door demanding reform, picking students and wanting the curriculum to be "work-based." As business people who are always conscious of the effect of change on our workforce, we have a tendency, when we step outside of our doors, to fail to see the stress we are placing on another system and the people in it.

- **Students need to be paid as workers**.

  Although volunteerism is alive and well in America, school/work-based education does not fall into the volunteer category. If you are trying to instill good work values in your students and if you want to treat them as employees, then it follows suit that you need to pay them for their work. Our expectations were met. We found by sometime during their senior year, if not earlier, these students became good workers — coming in on time, dressing properly, having the correct attitude and being productive.

- **The major challenge facing school-to-career programs is finding more employers to participate**.

  ProTech now includes the health care, financial services, utilities and communication, environmental services and business services industries. Collectively, we have only reached 800 of the 6,000 high school students in the Boston Public Schools. If only 30 percent of these students are college-bound, then there are still 70 percent in the available pool. If only 25 percent of this number were to qualify for a ProTech, there would still be a minimum of 1,000 students a year who could profit from this opportunity. In fact, headmasters and principals report that they have qualified students who want to get into ProTech, but there are not enough slots.

  Health care is now in a phase where it must successfully compete for customers (patients) like other business entities in the city of Boston. Within this industry, we compete against each other for business

advantages and to obtain employees. **Yet, one of the hallmarks of the ProTech program is that health care institutions cooperate, and do not compete, when it comes to developing a training program to enhance the education of the young adults who will be our future workforce.**

We have forged a strong coalition between the schools, the teachers and the employers, all held together by the Boston Private Industry Council and "sheer necessity." As we enter yet another period of severe workforce shortages, we are confident that school-to-career programs can continue to provide opportunity and hope to additional generations of students.

George H. Kaye, Human Resource Executive with Partners HealthCare Systems Inc., is one of the founders and designers of Project ProTech. Mr. Kaye is the former Chairman of the Board of Directors of the Health Employer School-to-Work Network. The Network is a national organization that encourages and assists health care employers in implementing school-to-work.

SCHOOL TO CAREERS: A NEW REVOLUTION

by Larry Stupski
Charles Schwab & Company, Inc.

Charles Schwab is an international financial services corporation managing investments for more than four million individuals and institutions through a network of 235 branch offices, regional phone service centers, automated telephone systems and on-line services. In 1975, when Charles Schwab & Co., Inc. opened its doors for business, brokerage services were provided one way — through commissioned brokers. Our philosophy of helping investors help themselves revolutionized the industry. We saw a business opportunity in 1975 that would change the way our industry did business. Now, more than 20 years later, we see another such opportunity — in the area of workforce development.

The recruiters in our Human Resources Department tell me that our ratio of applicants to hires is too high and the quality of the applicant pool is too low. Recruiting and training costs are high. Turnover of our entry-level workers is up. We see school-to-careers, (STC) as a means to address these issues, and through our STC initiative we have gained visibility and credibility in the community.

We recognize that the same principles that apply to our company have implications for the broader community as well. If connecting the classroom to the workplace can help diminish the skills gap between what employers require to remain competitive and the jobs for which graduating students are adequately prepared, this is an effort that will serve our entire nation.

STC at Schwab

Schwab is involved with STC both at national and local levels.

In 1993, before the passage of the School-to-Work Opportunities Act, Schwab initiated a system of workforce development in which we brought high school juniors and seniors into our corporate headquarters for part-time work and paid summer internships. We have found that students do productive work for us, allowing us to enhance productivity in the short run while building a workforce equipped with the skills that we need to meet our plans for the future.

Examples of productive work done by high school students include managing both the subpoena process in our legal department and the electronic peer review system in our technology department. Students are also helping to run the summer internship program.

We are convinced that STC is a good business decision and have been growing our company initiative by expanding the paid internships to our call centers nationwide. We encourage managers to consider ways to make use of part-time student hires while providing students with opportunities to learn new skills. Employees throughout our company are eligible to sign up as speakers at schools or as workplace mentors. We also feel it is important to support teachers in developing SCANS-based curricula as well as hosting teacher training externships and job shadowing experiences.

We limit our high school program to public high schools which are focused on SCANS competencies, open to curriculum change and flexible in working as partners. By defining the terms by which high schools can participate in Schwab's STC initiative, we hope to leverage change in the high schools.

The San Francisco STC Partnership

We are also engaged in the development of STC on a local community level. In my capacity as the 1997 Chairman of San Francisco Chamber of Commerce, I helped to initiate the city's STC Partnership. With leadership from the Chamber, San Francisco Unified School District and City College, the Partnership is working on a plan to bring the community stakeholders together to create a sustainable STC system in San Francisco. This has been an arduous, but productive effort, and we continue to learn as the partnership develops.

The National Employer Leadership Council

Perhaps one of our best links to the national scene is our company's involvement with the National Employer Leadership Council (NELC). Through NELC, we participated in the development of the widely used employer participation model as well as "employers-only" conferences on STC.

What is Working Well

Through our participation in STC we have learned both about what works well and what can be challenging in this arena:

- **Paid internships**

  In addition to the skills and experiences that students and our employees develop, paid internships help to extend awareness of the STC effort throughout the community. Students have become STC ambassadors on their high school campuses, sharing their experiences with other students and teachers, as well as with their parents. A student can be a real bridge builder for the effort.

  The success stories that arise from the internships are great internal and external marketing tools. We recently had a high school summer intern who was so successful that she continued to work with us part-time through the school year. When she was accepted to college on the east coast, she applied for and got a part-time position as a customer service representative at a local retail branch, and will continue to work for us throughout her college years.

  Utilizing a community-based organization to act as the employer of record for students under 18 years of age has been a real help to us. This reduces our workers compensation and insurance liabilities and makes it easier for us to participate in STC.

- **Teachers in the Workplace**

  We have found that bringing teachers into the workplace is invaluable to the effort. Visits, in addition to a simple tour of various work areas, often include opportunities to "shadow" our employees as they do their jobs. I have seen many teachers have "aha" experiences after spending time in our various facilities around the country – from realizing the importance of verbal communication and business English to the value of computer skills at work. Teachers have been surprised at the importance of an employee's contributions during business meetings. After a recent visit, one teacher said that she was going to refocus her curriculum to develop her students' ability to think on their feet, verbalize their thoughts and present them loudly and clearly to

others. Both teachers and students alike are surprised by the widespread use of technology in the workplace, and teachers have revised curriculum as a result.

- **Employees in the Classroom**

  Sending employees into the classroom has benefits for both our employees and students. It not only increases employee motivation around STC but also helps develop their public speaking and coaching skills. For the students, these class visits raise awareness around high skill, high wage careers — one of the first steps in engaging students in school. Academics become more relevant to the real world and students' personal goals are often raised to include postsecondary education and a career. These lessons are not lost on teachers and often a classroom visit breaks down the communication barriers between business and educators.

Lessons We Have Learned Along the Way

We are still learning from our experiences. Following are some of the challenges we continue to face in moving STC forward in the company and community:

- **STC does not sell itself**.

  Initially we thought STC was such a great idea that it would "sell itself." This, however, is not true until *after* managers start to work with high school students. Before that, there can be misperceptions about the maturity and competence levels of a high school students and the time commitment necessary. We have found that STC requires a four-part sell within a company like Schwab: to the (1) CEO, (2) HR director, (3) manager and (4) supervisor. The "selling" effort must be made at all levels to insure buy-in and sustainability of the initiative.

- **Staffing (personnel) should be the organizational home for STC**.

  STC is a strategic staffing initiative, and this should be reflected in the budgeting and positioning of it within the company. Housing the initiative elsewhere creates the perception that it is an add-on, not an initiative of high commitment. When we placed the effort elsewhere, we found that the company did not perceive the students to be as legitimate a staffing resource as we would have liked.

- **A fast-paced corporate culture does not always support STC**.

  Because of our rapid growth, both recruiters and hiring managers seek the "already ready" employee versus the "almost ready or in process" employee. The corporate structure is not yet strategically oriented into the longer term perspective that STC initiatives require to be successful. Also, as a result of growth and internal promotions, it is difficult to create a stable environment for students. A manager may not stay in his or her department or position long enough to mentor student workers. This can be further complicated by turnover at schools.

- **We can't get them here!**

  Some students cannot get to the worksite. A major hurdle to success in STC is the lack of adequate public transportation in many of our locations. Help is needed from several public agencies to improve transportation for the students.

- **School hours and work hours--it can be tough to schedule students**.

  Our busiest hours are when the financial markets are open, yet the schools say students are available after school only. This is a disconnect that we have run into across the country.

- **When creating partnerships, do not forget postsecondary institutions and small businesses.**

  Postsecondary institutions play a critical role in STC because STC is for *all* students — college- and non-college-bound. Postsecondary institutions can play an important role in preparing students for high skill, high wage careers. When they are not at the table, the nuts and bolts of the effort (articulation agreements, college preparatory activities) and the perception of STC suffer. Small businesses, while often not having the resources to implement full-scale programs, are a great resource for opportunities at the workplace and participation in the classroom. Small businesses represent the largest category of businesses in the nation; their participation is important.

- **Getting STC off the ground requires real dedication, constant attention and effort.**

  There is still plenty of work to be done to improve the effort both at Schwab and in the community at large. The solutions to the workforce development challenges of today cannot be addressed by business, education or government alone. The solutions will be found in efforts that require true partnerships. When a partnership makes an investment in a forward-looking initiative like STC, a hurdle is crossed. The additional costs of serving greater numbers of youth are marginal.

It is that very first step in building partnerships that will have a long-term payoff for us all.

Larry Stupski is Vice Chairman of the Charles Schwab Corporation. On behalf of Charles Schwab, Inc., Mr. Stupski's civic focus includes K-12 education reform, school-to-careers, technology in schools and economic and workforce development for the San Francisco Bay Area and nationally.

CLEAR LINKS TO CORE BUSINESS GOALS: A NECESSITY!

by Dave Johnson
Coors Brewing Company

Coors has partnered with the education community in numerous ways. Since 1985, Coors has had an Engineering intern program, recruiting seniors from universities throughout the West. We have hired more than 20 degreed engineers in five different disciplines from this pool. In 1993, we hired an intern from a local community college, and we are currently working with Golden High School to provide job shadowing for four students in the upcoming school year. We have also established an intern program with Denver Public High Schools serving minority students. Currently, eight students are enrolled in this program.

In 1993, Coors Brewing Company also operated an internal apprenticeship program that was less effective than intended. At that time, we were anticipating attrition of more than 60 percent within our maintenance work force over the next six years. As the apprenticeship program was very difficult to administer, we partnered with education to develop a curriculum and administer a maintenance training program. We discovered that Coors must focus on our core business of making quality beer, not the business of educating employees.

In recruiting new maintenance trainees, it is mandatory that they have a recent two-year associate degree from institutions that have curricula that meet our needs. New trainees complete a two-year on-the-job training program, then become full-time journeymen. Through this program, we have assisted in the development of two Associate Degree programs — Industrial Maintenance and Industrial Electronics — using curriculum from two local community colleges.

Melding Tech Prep With School-to-Work

A big success story occurred when instructors from Front Range Community College and Delta High School participated in Coors' on-site technical training classes at no cost to their educational institutions. About $57,000 in state-of-the-art electronic equipment was donated to Delta High School following the training of two of their instructors. Delta High School has since applied for a Tech Prep grant and is working on articulation with the Unified Technical Education Center (UTEC) in Grand Junction, Colorado. Both institutions are located on the western slope of Colorado, with Coors located in the Denver metropolitan area. This program will be expanded to the Advanced Higher Education Center at Lowry in Denver (Lowry was formerly an Air Force base). The Colorado Community College System acquired part of this facility and now has multiple community colleges and universities providing classes. Also located at the site is another center we are considering partnering with for training, the Rocky Mountain Manufacturing Center.

Coors Ceramic Company has a Manufacturing Academy which partners with two local schools, Golden and Arvada

West High Schools, for the purpose of curriculum enhancement. Employees initially started worked with environmental technology teachers, but have expanded to working with chemistry, accounting, drafting and English teachers. In the drafting class, a business simulation is taking place, and the classroom functions the same as the drafting department at Coors Ceramics.

Representatives of secondary and postsecondary schools from Colorado, Wyoming and Oklahoma have visited Coors. We have hired employees from Francis Tuttle Vocational School in Oklahoma City, Rankin Tech in St. Louis and local community and technical colleges. Additionally, Coors technicians assisted in developing curriculum for the Telectronic Associate Degree program at Front Range Community College in Denver.

My personal involvement began in 1986 after I had acquired a new technical group, all with associate's degrees. Wanting to learn more about training, I volunteered to serve on Colorado's State Vocational-Technical Advisory Committee, and helped develop the Principles of Technology classes, which was the first time such courses were introduced to Colorado's education community. That particular committee evolved into the State Tech Prep Advisory Committee in 1991, and in 1995 it became the Colorado Tech Prep/ School-to-Career Advisory Committee, on which I served as chairperson.

The committee has assisted in a systemic change movement in many educational communities throughout the state. It meets statewide, and members have the opportunity to speak about Tech Prep and school-to-career with educators, students, parents, community, business leaders and school board members. Committee members delivered more than 50 such presentations in 1996. Members also participate in selecting Tech Prep grantees and are involved in the technical assistance and review process. This process involves business and educators coming together to achieve common goals, improve communication and expand the concepts of Tech Prep in creating school-to-career systems.

Mentoring is extremely important if students and instructors are to understand work ethics in business and industry. Working with school personnel has made administrators and teachers aware of the current work environment, technology and ethics which need to be incorporated into the classroom curriculum. I would also like to see business and industry partner with educators to develop re-credentialing/ recertification programs.

As partnerships between business persons and educators grow, more company personnel learn about school-to-career and get involved. A huge obstacle is dedicating the time to School-to-Career, since as an employee of Coors Brewing Company, my focus is on our core business of making quality beer. Thus, investing in people and the future work force has to be tied to core business goals. Convincing others at all levels to be involved as partners is the challenge. One excellent strategy is to have more employers use the Employer Participation Model of the National Employer Leadership Council to build support.

Dave Johnson is Manager of Core Technical Services and Instrumentation for Coors Brewing Company. Mr. Johnson has served on numerous committees and boards whose mission is to improve the current workforce and help prepare students to become our future workforce. He currently serves on an advisory board to develop a Content Standards Program for the Jefferson County (Colorado) school district, the largest K-12 school district in the state with an enrollment of 85,000 students. Content Standards-based learning is demonstrated learning which drives student and teacher accountability.

SUSTAINABLE STRATEGY FOR THE NEXT CENTURY

by Renee Lerche and Mike Schmidt
Ford Motor Company

The School-to-Work Opportunities Act is suffering a mid-life crisis. Buoyed by the tremendous bipartisan political support it received upon passage in 1994 and the numerous new local partnerships that have sprung up all across the country, school-to-work supporters can look back at the past few years of activity with justifiable pride. However, as we look forward to the final years of the Act, a number of difficult questions emerge to which there are no easy answers. The most pressing of these questions is: How can we ensure that, after the Act sunsets, we have sustainable school-to-work systems in place in all 50 states?

In this paper, we outline a series of steps that can and should be taken to address the question of sustainability. To provide some context for our views on this issue, we begin with background information on Ford Motor Company's approach to school-to-work and the way this approach has evolved over the company's history.

Background: Ford Motor Company and School-to-Work

At Ford, we view our involvement in school-to-work and other education reform efforts in two ways. First and foremost, it is an issue of good corporate citizenship. As a member of the community, we have an obligation to do our part to work to address critical issues facing the community, and few issues are as important as the quality of educational opportunities we provide for our children. At Ford, this commitment to education is not just a slogan — it is a part of our history. Throughout his lifetime, Henry Ford had a deep interest in education, founding a number of K-12 schools. These schools linked the academic knowledge that a student learned in the classroom with what he or she might later do in the workplace. Ford Motor Company continues to support this notion today with its commitment to school-to-work and education reform.

This view of school-to-work as a corporate citizenship issue is intimately linked to a view of school-to-work as a key workforce development strategy for the company. In today's intensely competitive global economy, a highly skilled workforce is critical to our survival and continued success. In a knowledge economy, where capital is mobile and advances in technology are quickly replicated, human capital is the key to a company's competitive advantage. The education system is our supplier in this area, and we have a vested interest in its health and well being. Investing in systemic reform efforts like school-to-work is therefore not a peripheral issue, but a critical activity that lies at the core of our mission and strategy. Ford's investment in school-to-work and education reform is an evolutionary process of building partnerships with public education that continue to evolve and adapt to meet the needs of a changing world.

Early in our company's history, Henry Ford founded a series of trade academies that gave students a solid grounding in academic and workplace skills. These academies, the last of which closed its doors in the late 1960's, were vocational in nature and created a unique model of linking work-based skills with a strong grounding in traditional academic

subjects. The company also developed a strong philanthropic focus on educational giving, which has evolved over the years into a multi-million dollar endeavor.

In the late 1980s, as the school-to-work movement began to take off, Ford moved to a deeper involvement in curriculum development and teacher professional development by creating the Ford Academy of Manufacturing Arts and Sciences (FAMS). FAMS is a rigorous academic and work-based high school program that introduces students to the concepts and skills that they will need to understand and succeed in the complex and ever-changing manufacturing world. Designed as a career academy model, FAMS courses provide an opportunity to learn math, science, technology and communications skills in real-life contexts. FAMS is currently in 57 high schools in 15 states and Canada.

During this same period, Ford also became active in building national educational partnerships. After the passage of the School-to-Work Opportunities Act in 1994, Ford joined with 17 other corporations to form the first national corporate partnership organization devoted solely to promoting work-based learning opportunities for all students—the National Employer Leadership Council (NELC). Alex Trotman, Ford Chairman and CEO, currently serves as the chair of this organization, which has grown to include more than 100 corporate partners. Member CEO's have pledged to sustain their own work-based learning programs and promote school-to-work issues within their own companies, the business world and the general public. They also have agreed to join forces to create and disseminate useful tools that enable the member companies to share best practices and encourage participation from additional employers around the country.

Finally, in 1996 Ford moved to the next level of involvement in school-to-work and education reform with the creation of the Henry Ford Academy of Manufacturing Arts and Sciences, a publicly-chartered high school. The Academy is the nation's first partnership effort involving a major company, a nationally known cultural organization, public K-12 education and higher education. Chartered by the Wayne County (MI) Regional Educational Service Agency and sponsored by Ford Motor Company, the Henry Ford Museum and Greenfield Village, the Academy provides a unique opportunity for public education, the private sector, the non-profit community and higher education to work together in a true partnership to create new models of teaching and learning from the ground up. It is our hope that the Academy will serve as a national model for education reform, and a resource for educators across the country. The Academy will use a variety of methods--including distance learning and the Internet, conferences and symposia and site visits--to share its experiences and new curriculum models freely with educators from around the country and all over the world.

Systems Building and Sustainability

As we move into the final phase of funding under the School-to-Work-Opportunities Act, there is a central question that is critical to its ultimate success or failure: How can we ensure that the Act is not simply creating a web of individual programs but building strong school-to-work systems that will survive long after the Act sunsets in 2001? While there are no easy answers to this question, several steps can be taken at the local, state and national levels that would move in the right direction.

Local Action

On the local level, successful school-to-work grant proposals should be required to meet the following five criteria:

1. include the active participation of a wide array of partners, including schools,

employers, community-based organizations and higher education;
2. employers involved have a central role in the program that is well defined and has measurable outcomes;
3. the program explicitly links and integrates core academic skills with the skills needed for success in the workplace ("employability skills");
4. the partners in the proposal define how the program will be sustained after the school-to-work funding is gone; and
5. the proposal describes how lessons learned will be shared and successful models for action can be transferred to other communities in the area (replicability).

By requiring school-to-work grantees to meet these explicit criteria, communities can begin to force local programs to think beyond the limited availability of federal school-to-work funding and build sustainable workforce development activities that allow state and local officials to create viable systems rather than individual islands of excellence.

State and Regional Efforts

More attention needs to be paid to creating clearinghouse dissemination activities at the state, regional and national level. When the School-to-Work Act was first taking shape in 1993, there was a strong movement to include funding for a central technical assistance function that would have identified the most promising school-to-work models and worked to disseminate best practices. Unfortunately, this technical assistance piece was dropped from the final version of the Act. While the Act has spurred the creation of a number of innovative school-to-work programs across the country, there is not nearly enough sharing of information between local, state and regional program delivery areas.

The National School-to-Work Learning and Information Center — an organization created to provide information, technical assistance and training to school-to-work partnerships across the country — is a step in the right direction, but much more must be done in this area. Local school-to-work partnerships often spend precious dollars and energy learning difficult lessons that have already been learned by neighboring towns and states. Programs frequently created from the ground-up when similar models that are already up and running in other communities could have been easily imported and modified to suit local needs. It is true that there are no "one-size-fits-all" programs that can meet every particular local need, but there are always models and lessons that can make the creation of any local school-to-work programs a much easier — and often less expensive — endeavor. Information technology gives us the ability to share vast amounts of information about best practices, but today there are literally hundreds of websites describing various school-to-work and other education reform efforts. Without centralized state-wide, regional and national mechanisms for sifting through the thousands of school-to-work programs that currently exist and providing relevant information in a format that is meaningful and easy to access, data on best practices will continue to be inaccessible to most local programs and providers.

National Efforts

At the national level, the creation of true national employability standards must be linked to and integrated with the academic standards movement. Unfortunately, the standards process has been politicized to such an extent that these two efforts have been separated, and the employability side of the standards movement has garnered little attention. The core academic skills and knowledge that a student needs to succeed in the classroom must be linked to the core skills and knowledge needed for success in the world of work. To separate them is illogical and ultimately harmful to the overall success of any school reform effort. One of the greatest challenges facing our schools today is that students do not see any relevance in

what they learn in the classroom. By separating academic standards from employment standards, that gap is only widened.

Finally, the current push toward block granting workforce development funding to the states must include all federal programs that affect young people, including second chance and vocational education programs. Any attempt to integrate these programs into a new system of funding must provide a common rationale, or vision, for their integration. School-to-work can and should provide such a vision. It focuses on meeting the needs of all young people by providing them with the academic and employability skills that they will need to become productive, contributing citizens. Whether a young person is in school or out, college-bound or headed directly from school to the workplace, he or she can benefit from exposure to the kinds of skills demanded in today's highly competitive global economy.

Looking Ahead

Despite these concerns, there are many reasons to celebrate the progress that the School-to-Work Opportunities Act has made and to be optimistic about its future. The Act shifted the existing school-to-work movement into the national spotlight, generating new levels of interest and activity across the country. Thousands of new linkages between the classroom and the workplace have been created, and a framework has been put into place that will allow states to begin to bring a systemic focus to their school-to-work efforts. Perhaps most importantly, the Act has provided a new structure that allows employers and educators to break down long-standing barriers to communication and begin to form meaningful partnerships that can meet the needs of both while providing students with the academic and the employability skills they need to succeed

These gains, however encouraging, are still fragile. As the Act moves into its final two years of funding, it is critical that attention is given to the kinds of systems building and sustainability actions discussed in this article. If we can use the next two years to focus on these sort of activities, school-to-work will be in a strong position to grow and prosper in the next century.

Renee Lerche is the Director of Workforce Development for Ford Motor Company, and is responsible for developing an integrated workforce development strategy for external education, supervisory and management assessment and development systems.

Mike Schmidt is the External Education Programs Manager at Ford, and oversees the company's major national partnerships with public K-12 education, including the Henry Ford Academy of Manufacturing, Arts and Sciences.

BUILDING NEW BRIDGES

by Michael Bzdak
Johnson & Johnson

Johnson & Johnson, with approximately 89,500 employees, is the world's largest and most comprehensive manufacturer of health care products serving the consumer, pharmaceutical, diagnostics and professional markets. The Johnson & Johnson family consists of 170 operating companies in more than 50 countries, selling products in more than 175 countries.

The reform of the American education system has become a highly charged and highly publicized issue in the last ten years. A day does not pass without an article, editorial or opinion on education reform appearing in the news media. Since every American has a stake in the future of American education, the issues surrounding reform are often complex and contentious. The proposed solutions continue to grow exponentially in relation to perceived problems.

Historically, corporate America has played an active role in improving education although primarily in the form of philanthropic support. In fact, overall U.S. corporate giving to education was up from 35 percent of overall giving in 1991 to 37 percent in 1992 and up again to around 40 percent in 1996. Many argue that the business community has to move beyond philanthropy to make a significant difference in the reform of national public education.

While this may be true for most businesses, Johnson & Johnson manages corporate giving in a strategic manner, closely tied to the business and more akin to social investing. We invest in organizations and people that commit to measurable results. Through programs of its own design and direct grants to leading nonprofit organizations, Johnson & Johnson seeks to improve the quality of health care and education in the communities where our employees live and work.

The Johnson & Johnson Bridge to Employment Program (BTE) was developed by the Office of Corporate Contributions to help young people who are likely to drop out of school acquire skills that will make them job ready. Our program focuses on community programs that expose "at-risk" students to careers in health care. Since its inception in 1992, BTE has evolved as a national school-to-work program.

BTE, through K-12 health care career exposure, mentorship and co-op experience components, enables students to receive proper education and training to prepare for careers in health care, whether it is a two-year Allied Health program, more extensive training or a specialized and advanced curriculum and/or medical school. Practitioners from our operating companies work with educators to develop "real world" teaching modules. In this way, business is helping to shape curricula and, in turn, facilitating the transition from school to work. The program seeks to avoid a common problem with some school-to-career programs — preparing students for low-skill service jobs.

BTE, with its school-to-work focus, complements the school-to-work legislation signed by President Clinton. Johnson & Johnson's focus on health care careers, however, distinguishes our program from most other employment training approaches. Our program currently operates in nine communities in the United States and Puerto Rico.

Our nonprofit program partner, the National Alliance of Business (NAB), is at the forefront of education reform in the United States. Its membership includes key representatives from all sectors of corporate America. NAB is a proactive force in American education reform and remains in touch with relevant business-education issues as they develop.

I argue that philanthropy, properly planned and managed, can and will be a major player in school-to-work and school-to-career efforts. By partnering effectively with change agents in communities, strategic corporate giving can act as a catalyst to move education reform to a higher plane. For example, we have partnered with community colleges to design or enhance school-to-career efforts in Miami, Florida; Trenton, New Jersey; and Albuquerque, New Mexico. These partners have proven to be true change agents committed to systemic community-wide education reform.

Our investment in these organizations and programs goes well beyond writing a check. Johnson & Johnson employees, leaders from NAB and community leaders design Bridge programs collaboratively to improve school-to-work efforts in communities across the country. These three-way partnerships are not difficult to design or to manage, but our goal is systemic change and permanent, measurable improvement.

The Challenges

The key challenge to any corporate involvement in school-to-work, and in education reform in general, is evaluation. Before any commitments are made, the business and school partners need to know when, how and if they are making a difference. Evaluation is a difficult issue in business-education partnerships. Questions around what and how to measure can cripple any efforts before they enter the classroom.

The design of our evaluations can range from measuring outcomes such as grades and attendance to attitudes toward and knowledge about health care careers before, after and during the program intervention. Ideally, we would like to see a combination of hard and soft data and measurement over the three years of funding to determine processes, outcomes and impact. We offer supplementary financial support for evaluations to each of our sites and are designing an evaluation template in order to perform cross-site comparisons.

There has never been a more opportune time for businesses to become more intensely involved with schools. Many states have convened business-education summits where leaders from the corporate community dialogue with the education community leaders. In New Jersey, Governor Christine Todd Whitman and Prudential CEO Art Ryan led an effort in 1996 that will be followed by another summit in November, 1997 to include teachers and administrators.

Newly introduced content standards became the focal point of the Summit. The standards have become a rallying point for leaders in education, business and government. In addition to the seven content area standards, New Jersey developed cross-content "workplace readiness" standards that cut across all of the content standards. These "real world" standards offer the business community opportunities for involvement in education reform.

The value of these summits resides in the sharing of ideas, plans and resources. As a result of the New Jersey summit, large and small businesses were briefed on the spectrum of business involvement in education. Companies in New Jersey participate on many levels ranging from adopt-a-school efforts to speakers bureaus to formal school-to-career programs. Not all companies, no matter what their size, are

ready for school to work. Any properly nurtured and managed involvement, however, can evolve to a formal school-to-work system.

The majority of New Jersey-based businesses participated in the initial summit. We, at Johnson & Johnson, support this important effort for many reasons. To focus the business community on tangible goals is perhaps the most important aspect of this meeting. Most companies are approached almost daily to fund myriad education reform initiatives ranging from New American Schools to local parent/teacher organizations. By getting behind a state-wide initiative, businesses can channel their human and financial resources toward common goals shared by school boards, board rooms and state government.

As a result of the New Jersey Business-Education Summit, leading companies with model programs are able to mentor other New Jersey companies on how to get started. The standards have helped to break down the walls between business and education and between businesses themselves.

The Future

Ideally, the school-to-work movement will become an inherent attribute of schools and businesses. A case has to be made for more direct benefits for business involvement in education. For some, it is not enough to know that we can impact tomorrow's workforce. In fact, companies throughout the United States have very defined, and immediate, workforce needs that may be met by partnerships with local schools. Since business-education partnerships are two-way streets, school administrators and teachers have to be equally prepared to benefit from these relationships. The education community must decide how business can help them achieve their "business" goals.

Richard Murnane and Frank Levy, in *Teaching the New Basic Skills*, make a convincing case for the need to change the way we perceive both school and work. Since most businesses manage for change, they are valuable resources for schools seeking to change. As the world of work changes before our eyes, public school teachers and students have the opportunity to take part in these important changes as more than merely spectators.

As corporate philanthropy moves toward a more focused alignment with business goals, school-to-work programs are poised to attract more attention and support. Properly designed and managed, school-to-work efforts provide business with a cogent means to become involved with education reform. At Johnson & Johnson, we believe in the power of philanthropic partnerships throughout the world to help us design, manage and evaluate school-to-work initiatives.

Michael Bzdak manages Johnson & Johnson's corporate giving to K-12 education, teen pregnancy prevention, volunteerism and art/cultural affairs. He serves on the Conference Board's Business/Education Council as well as New Jersey Governor Christine Todd Whitman's Advisory Council on Volunteerism and Community Service. He is currently a doctoral candidate at Rutgers University.

TRUST IS THE ELIXIR OF COMMITMENT

by Lisa Goldberg
Exempla Health/Lutheran Medical Center

The recently merged Exempla Health and Lutheran Medical Center recognizes that two primary incentives drive the development of corporate community service in the health care industry: (1) the need to maintain tax-exempt status and (2) the need to respond to the growing influence of managed care. Providing meaningful community service by partnering with public schools to elicit systemic educational change and improve wellness behaviors can satisfy these needs. Lutheran Medical Center's Youth Education Alliance for Health (Y.E.A.H.) is a community partnership that works to enhance wellness behaviors, improve academic performance and build health care career awareness and job-market readiness.

Y.E.A.H. brings health-care professionals together with educators to plan and enhance existing science curriculum for seventh, eighth and tenth grade students at Wheat Ridge Middle School, Arvada Middle School, Jefferson High School and Arvada High School in Jefferson County, Colorado. Lutheran Medical Center provides in-class speakers, fact sheets, anatomical models, slides, overheads, x-ray images, general consultation and hospital visits designed to highlight the workplace relevancy of existing science curriculum.

In addition to this middle school and 10th-grade effort, representatives from Lutheran, Jefferson High School, Arvada High School, Red Rocks Community College and Front Range Community College work together to develop and deliver new courses for high school juniors and seniors that link academics with wellness behaviors, career awareness and job-market readiness. Health Technologies I, Health Technologies II, Business Health Communications, Academy Algebra and Early Childhood Professions are courses offered as part of the Y.E.A.H. Med-Prep Career Academies at Jefferson and Arvada High Schools.

It Takes Time

"No one cares how much you know until they know how much you care." This quote was written on the board in a classroom at one of our partner schools. It is an eloquent description of the trust and respect Y.E.A.H. team members have for each other. As I sat and listened at my first Y.E.A.H. meeting nearly three years ago, it seemed that the teachers and the medical center staff spoke different languages. Lutheran employees were enthusiastic and energetic, and this was their chance to stretch beyond the walls of the hospital and expand the parameters of their job to make a real difference in their community. They were all college educated, had enjoyed academic success and were convinced that they knew how to improve the public school system one classroom at a time. They would demand academic rigor and inspire students to reach higher and try harder, using their own professional achievement as examples of the fruits of discipline and challenge.

The teachers were all at least twenty-year veterans. They had seen countless educational reform efforts and thousands of students from every walk of life come and go. They listened to the enthusiasm of their business cohorts with cynicism and resignation. Each had been asked by his or her administrator to attend this meeting and seemed to believe that it was in their own best career interest to listen politely to yet another

group tell them what was wrong with their teaching. Besides, they were science teachers, and hospitals are full of wonderful gadgets and toys that can make science fun. Maybe at the very least they would come away with a few borrowed bells and whistles for their students. The teachers felt that it was only a matter of time until the hospital tired of its newest cause and moved on to another. Meanwhile they would be politically correct and polite until it was over. The hospital folk were frustrated by what they saw as the teachers' lackadaisical attitude. Many of them believed they had discovered the problem with the U.S. public education system — disinterested teachers.

Educators, however, have taken a beating in the media, and as a result, many are bruised and defensive. Everyone seems to know what is wrong with education and exactly how to fix it. Many pundits and other analysts have painted an impressive picture of the successful system we would have if only the principles that run the marketplace were allowed to run our schools. The perception of the wisdom to be gained from the private business sector has grown to mythic proportions. Of course, most of these would-be reformers have not stepped inside a classroom since they graduated from high school. Undergoing bypass surgery makes one an expert in neither cardiology nor surgery. Yet there are many who believe that their experience as public school students renders them experts in the field of pedagogy.

It is understandable that some teachers meet their administrator's orders to bring in a business partner to implement the newest panacea for our educational woes, school-to-work, with an audible sigh of cynical resignation. Refusing to let inexperience and ignorance get in the way, this new business partner will be yet another in the line of "experts" who will invade their classrooms and tell them how to fix what is wrong. Meanwhile, individuals working in the private sector are often perplexed when teachers ask for more pay or complain about their working conditions. After all, they only work six hours a day, nine months a year and enjoy what seems to be near definite job security. No one asks them for justification of budget variances at the end of the month, regular business plans or progress reports. Their classrooms will not be re-structured nor their positions eliminated due to low productivity, substandard performance, or hostile corporate takeover.

Why Y.E.A.H. has Succeeded Where Other Efforts have Failed

Lutheran personnel and teachers work together to plan and deliver lessons throughout the school year. The time and energy invested in brainstorming outrageous ideas, debating philosophies and hashing out the goals, objectives and logistics of implementing each lesson creates a sense of ownership and commitment on both sides of this business-education partnership. It is a process that fosters trust and respect. It becomes quickly apparent that the primary question is neither who is to blame for what is reported as the poor state of education in this country nor who is the more politically powerful half of the partnership, but rather how can students be assisted in learning most effectively. This type of collaboration and devotion would be unlikely to develop after a once-a-year "Career Day" or "Health Fair." It is said that trust is the elixir of commitment, and it takes ongoing, personal interaction to build trust. The flexibility, tolerance and desire to make a real difference in the community are essential to the success of this partnership. It will take a similar commitment in the communities of each and every public school to create and support a system that provides the best education possible for our young people.

One of the keys to the success of Y.E.A.H. is the personal interaction between hospital personnel and teachers.

In the spirit of true partnership, some planning meetings are held at the school and some are held at the hospital so both groups have the

chance to see into the other's world. Hospital employees are often amazed at the reality of the day-to-day in a public school classroom. They see teachers who spend six to seven hours a day delivering back-to-back lessons to some 150 students, with administrative duties and disciplinary actions peppered in between. Planning periods before school, during lunch, after school, on weekends and during school breaks are used to develop lessons, improve curriculum, align curriculum with district standards, contact parents, grade papers, coach athletic teams, sponsor student clubs, attend mandatory meetings and acquire sufficient continuing education hours to keep their teaching certificates current. In addition to these responsibilities, these teachers make time to meet with their Lutheran partners on a regular basis to plan new lessons and coordinate new opportunities both on- and off-campus for their students. Lutheran Y.E.A.H. team members usually end their first semester with a new respect for teachers and a recognition of their commitment to their students.

The teachers who work with Y.E.A.H. are equally amazed by the conditions and workplace demands placed on their business partners.

Health care, like many industries in the 1990s, strives to stay competitive and efficient. Program development and restructuring in response to market driven data analysis is constant, with job security often dependent on the result of these efforts. Job satisfaction depends on one's ability to cope with change and a willingness to work as long and hard as needed to do more with less. To accommodate school schedules and teacher requests, these health care professionals make time to meet with teachers before or after school and often spend their day off as a guest speaker, tour guide or curriculum consultant for Y.E.A.H. Teachers usually come away with an appreciation for the pressures faced by their business partners and a clearer picture of the world for which they are preparing their students.

As part of the world of education, students can also experience culture shock upon their first interaction with the business world and its representatives.

Students are often strangers in a strange land in a professional setting. School-to-work must take nothing for granted. Students will need to be coached on appropriate dress and manners before either coming to the partner facility or before a guest speaker is allowed in their classroom. The more one-on-one contact between students and business professionals, the better, but students must be equipped with the etiquette required to make the connection. They need to know, for example, how to leave a clear, concise and informative voice mail message with a phone number and good times for a return call. They will need to understand the importance of their body language, attitude and the impression they make. For their part, business partners will need to be invested enough in the process to take the time to learn what they can expect from the young people they work with by observing students and asking teachers questions. Some individuals may need to be told or discover for themselves that parenting one child is quite different from teaching thirty.

Once the cultural gap between the worlds of business and education has been bridged, and once the team is united by its shared vision, then the work can truly begin. Business-education partnerships — even passionately devoted ones like Y.E.A.H. — can be thwarted by the rigidity of established systems and expectations. From the outside, the task of creating and coordinating a school's schedule seems daunting. Changing one piece affects every other and can raise the ire of various factions, such as the music teacher who jealously hordes his after-school priority spot for tryouts and rehearsals, or the algebra teacher whose policy says that any student who does not spend fifty minutes, five days a week in her classroom will suffer the consequences — no excuses or exceptions. These individuals have structured their delivery

to accommodate the existing system, and many have learned to be quite successful under the current circumstances. They are comfortable and feel that the integrity of their classes would be compromised if they bent their rules. Focused on their own classrooms, however, they miss the larger picture.

At Lutheran, when there is a deficit in the budget, every department works to cut wherever they can. It is in the best interest of each employee to make sure the organization stays financially strong. If the goal of public education is to provide the best possible educational opportunities for each student, it would seem that division and territorialism are contrary to the greater good. There have been a number of Y.E.A.H. students who have been forced to choose between participating in an off campus learning module at the hospital and maintaining their grade point average in classes where there is an indiscriminate penalty for every absence.

Class organization and scheduling, how time is spent in and out of school, the purpose of homework and the way space is allocated and used all need to be re-evaluated if business- education partnerships are to grow and flourish.

Fifty minute classes, five days a week may be sufficient for some courses some of the time, but there may be times when it is in a student's best interest to spend an entire day learning first-aid and CPR, participating in a cadaver lab or improving team work and communication skills on a high-ropes course. There must be enough flexibility in the system and in the expectations of students, teachers and parents to make the most of the opportunities available through partnerships with businesses. Too much order stifles creativity, but too little order causes confusion. The balance between flexibility and established order will need to be continually adjusted and re-adjusted. There is comfort in the predictability of the status quo, even if the results it produces are less than what we would like. Courage will be needed to endure moments of confusion and even chaos as new approaches are applied to the old problems of logistics. We will need to have faith that a natural sense of order will prevail and that a new, more vital system will be the result.

Flexibility is needed not only in our systems but also in our definition, understanding and communication of what school-to-work is all about. Misconception and controversy seem endemic to education reform.

The scope of school-to-work may need to be broadened to transcend the specific vocational training programs and internships designed for older students. Young people gain valuable information from exploring new fields of interest through job shadows and intern experiences or simply interviewing professionals in these fields. School-to-work, however, can be much more than this if the emphasis is placed on weaving the mastery of transferable workplace skills into a district's academic standards. These skills, such as effective teamwork and communication, problem-solving and the ability to learn new techniques and procedures are applicable to not only every industry but also success in higher education. Add to this the self-esteem and confidence students can gain by expanding their understanding and interactions with business professionals, and you will see an increasing number of students graduating from high school prepared to succeed as adults.

The value of school-to-work is not apparent to all. It will be necessary to educate public school administrators, teachers, parents, the business community and postsecondary educators.

Teachers and administrators may be concerned about losing their autonomy, some parents believe that school-to-work narrows the options available to their children and many representatives from postsecondary

education equate school-to-work with vocational education and compromised academic standards. Y.E.A.H.'s Med-Prep Career Academy courses are very academically challenging — much to the surprise of some unsuspecting students. Mastery of this curriculum serves students well whether they are pursuing careers in health care or other occupations, college or direct entry into the workplace. Challenges, however, remain. For example, Y.E.A.H.'s Business Health Communications class is not recognized by many postsecondary institutions as a legitimate English course, which has discouraged many students from registering for and benefiting from this course. Perhaps the best way to educate the public about courses like this and school-to-work in general is to involve them in the process and to make sure they see and hear about the many success stories of students involved in these programs.

Like individual students, businesses, schools and communities vary in what they need and want.

Although some standardization of the system can help fortify school-to-work efforts, the individuality of each community, school district, school, classroom and business must be honored. Employers will need help understanding the many ways they can become involved in education, as well as help in understanding why they should become involved. Educators will need time to see the difference a community partnership can make in their classrooms. Everyone will need to make a consistent and long-term commitment to the process. A vision and a sweeping call to arms is a great place to start, but for true and lasting change to occur, it will take time and attention to the details and dynamics inherent in each business and education partnership. This will not produce quick and flashy results, but good solid programs that grow and improve with time and programs that deepen and become more graceful and eloquent with age. It will take hand-holding, patience and perseverance. The plan must be long-term. Short-term grant money provided as seed will be wasted if the resulting sprouts die from lack of water, air, sunlight and nurturing. School-to-work partnerships are like plants needing continued care and attention if they are to grow and thrive.

Acknowledging and working to bridge the cultural gap between business and education, creating flexible structures, developing and implementing creative and effective public relations strategies, honoring the diverse needs and wants of different communities and different partnerships and making a long-term commitment to the process that will support and nurture this reform effort to maturity are the components of success for school-to-work. It will take us all working together with a shared vision to make significant and lasting improvements in the system for our children.

Lisa Goldberg is the Business-Education Partnership Coordinator at Exempla Health/Lutheran Medical Center. As Exempla's liaison to the Jefferson County Public Schools, Ms. Goldberg oversees the Youth Education Alliance for Health (Y.E.A.H.) and represents Exempla in national, state and local community education associations.

WOMP: GIVE THEM SOMETHING TO TALK ABOUT

by Rogercarole Rogers
McDonald's USA

For many, if not most, middle and secondary school students it is a Tommy Hilfiger, Nike swoosh and Coke swirl world. Ask them, or their parents. Young people love brands. In fact, they brand themselves — willingly. They are also great ambassadors. They easily sell friends and family on why owning one product or service makes the difference.

Teens also respond to powerful, pervasive and persuasive advertising. The more creative and compelling a brand name is, the more they talk about, imitate and spread its messages. Teens are masters of the WOMP — Word of Mouth Power. (The WOMP concept was borrowed from Dale Dauden, a syndicated columnist and self-proclaimed "corporate curmudgeon"). According to marketing experts, successful story telling by consuming customers about a product or service is key to visibility and viability.

At McDonald's — one of the largest food businesses in the world — a major goal is to "walk and talk" opportunity for young people who work for us. There are many chapters to the story of the process we call the Youth Apprenticeship in Consumer Service Management. Here are the highlights and some of the lessons learned.

McDonald's Youth Employment

The restaurants are the largest employer of teens. For more than 40 years, McDonald's has employed high school students, training them on the "hard" and "soft" skills necessary to develop and navigate job success. Young employees learn the fastest and the most about making a living and working. It is also a time when they begin to think on their own terms about career opportunities. If an early job experience is positive — or not — they tell their friends and families. McDonald's restaurant managers encourage employee referrals. It is common for several family members or a circle of school friends to work together.

McDonald's U.S. System is a collaboration of independent franchisees and managers of company-owned restaurants. More than 85 percent are franchised. More than half of all franchisees and managers started in the System when they were teens. WOMP includes the stories of more than 2,700 independent businessmen and women who own and operate local businesses. These stories are about mentoring young people and developing senior managers and a second generation of owners.

Franchisees connect with their communities. They establish lasting relationships with their customers. The great majority reach out to local school educators and students. Most restaurants offer tours and support incentives for good grades, attendance or citizenship. Routinely, owners and managers appear at career days, hold mock interviews in classrooms, contribute education resources and support school events. Each McDonald's franchisee builds an independent corporation and fosters their own culture. While each works to distinguish the brand in their own way, all share the value of investing in their young employees.

Talk to a McDonald's franchisee or one of the managers like Art Checchian, an operations

supervisor and career employee, who gladly shares his story: "This job offers opportunities — not a guarantee — for advancement. I'm a father, as well as a businessman. I tell my employees what I tell my own kids. They have an opportunity for training and a focus that can put them on the fast track. All of the employees in our five stores started as crew."

Youth Apprenticeship Evolves

With the advent of the School-to-Work Opportunities Act, McDonald's started planning the Youth Apprenticeship. It seemed a natural extension of existing relationships with schools and student employees.

Our vision has always been an education-to-career collaboration with major scale and impact. We planned for a national demonstration in at least four states, with a Chicago pilot. By Spring, 1996, the Youth Apprenticeship had started in five Chicago high schools. In partnership with the U.S. Department of Labor and the MacArthur Foundation in Chicago, we soon surpassed our original plan. Today, more than 600 students have enrolled in the Youth Apprenticeship in 37 participating schools in Baltimore, Maryland; Muskegon, Michigan; Portland Oregon; Austin, Texas; and Chicago, Illinois.

We designed the Youth Apprenticeship in Consumer Service Management to link structured classroom instruction in the secondary school with training at the restaurants. Even before they start the job, our goal is to train student participants to think like the customers they will be serving. After an extensive search for learning materials about the consumer service sector, we called on experts in management training and academic assessment to help us produce a customized curriculum.

Among these is the Center for Problem-Based Learning (PBL) at the Mathematics and Science Academy in Illinois. They use a contextual approach to classroom learning where students develop and practice critical and creative thinking skills — core competencies for consumer service managers. Levels one and two of Consumer Service Management focus on work readiness, business math and communications, customer service, employee relations, business systems and career planning.

Teachers, with PBL tools, become coaches and cheerleaders. The educator's role is to encourage active real world problem-solving where there may be many or no "right" answers. Teachers receive an average 40 hours classroom training. They also spend at least one or two days, and sometimes one or two weeks, working in the same business sites where the students work.

After two years, students and teachers in the national demonstration and Chicago pilot have embraced the new curriculum. Daya Locke, Assistant Principal at Calumet Senior High School, offers an educator's perspective: "This is a rebirth for teachers and their students. It motivates teachers, who are used to staying in their boxes, to learn from each other, their students and their business partners."

Secondary school administrators may integrate the curriculum into existing business classes or teach it as a separate course of study. Depending upon the administration's plan, students enter as freshmen, sophomores or juniors. Students must be at least 16 when they qualify to interview for paid positions as crew or sales associates.

At each level, teachers assess students for skills mastery. The Council on Hotel, Restaurant and Institutional Education (CHRIE) and the National Retail Federation (NRF) helped establish these standards. In order to progress to entry-level employment, students must achieve the 80 percent or higher level on all assessments.

What began as a joint venture between McDonald's and Northern Illinois University (NIU), now includes The Lodge (Hyatt) in Oak Brook and Walgreens in Chicago and four states. National business partners work together to broaden our collaboration to federal, state and local governments, secondary and postsecondary schools, philanthropic organizations and other business partners. Local business partners do the same. Currently, franchisees in 15 additional sites around the country are starting up the Youth Apprenticeship process.

In order to operate the program, prospective sites meet ten major requirements:

1. a partnership with state approved secondary schools that prepare students and provide them with written and oral communication and math programs, consumer service employment, structured learning and formal training agreements and transition into postsecondary education;
2. recruitment of local business partners in the hospitality and retail trade industries;
3. agreements with business partners to mainstream students into regular management development programs;
4. formal articulation agreements between secondary and postsecondary programs to ensure curricular alignment and the transfer of student credits and graduation;
5. student assessment and certification;
6. student qualification for company interviews;
7. student recruitment, enrollment and preparation for company interviews;
8. resources and release time for teacher training;
9. site administration and project transition planning for schools, business partner trainings and integrating the program into local and state school-to-work systems; and
10. project reporting and evaluation.

What We Have Learned

The school-to-work or education-to-careers movement is in need of a strong injection of WOMP. The movement would be more visible and viable if it were better understood by the "customers" it seeks to serve: students, their parents, educators and business. School-to-work is often mistaken for vocational, cooperative and distributive education. These are old brands. So call it "school-to-work" or "education-to-career." The concept of employment opportunity for young people needs more "wow power." Those who do not see opportunity in an education-to-career process do not sign-on, support or sell it. There is a strong need for experienced, forward looking agents in the movement who can help tell, sell and set expectations for how school-to-work makes a difference.

There are six lessons that we have gleaned from our experience in the education-to-career movement:

- **Participants with even one year's experience in the Youth Apprenticeship process make the best sales people for recruiting purposes.**

  When students consider signing on for the Apprenticeship process, they must envision a program with high standards and long-term gratification. Educators have told us that their student apprentices "walk tall." They seem more connected, confident and mature. Other students pay attention to their WOMP.

- **A majority of the successful school sites started the process with a community outreach program for a summer or several weeks.**

  Differentiating the Apprenticeship within the school community — educators, students and their parents — is essential, especially in a school site where change and the "pilot

du jour" seem to be the only constants. The right introduction builds and sustains enrollment, expectations and enthusiasm. Students benefit from early experiences that help them begin thinking about setting and achieving life goals.

- **Teachers tell us that integrating the custom curriculum and students' work experience in existing classroom systems represents a challenge that we underestimate.**

  Both require strong knowledge of career development and of the world of work in an ever-changing education and employment world. The most successful teachers bring prior outside business — and even entrepreneurial — experience, preferably in the consumer service sector. Educators benefit from continuous, in-depth training, recognition and sharing stories about how they meet multiple challenges.

- **The PBL approach to customer service curriculum is a hot, new product that helps tell the youth employment story.**

  Creating new curricular materials has taken a greater investment of time, money and commitment on everyone's part than we ever anticipated, but the return is well worth it. There is constant demand for the "new" materials from educators, employers and franchisees who have not developed a Youth Apprenticeship site. We are committed to developing process tools. They promote the process.

- **Business partners are comfortable with high school students in entry level jobs, even when the business is oriented to adults. Their regular training system is organized to develop "first job" employees, and they already offer in-house training and career ladders for employees.**

  Recruiting employers to provide jobs and funding for program resources has been a priority since the beginning. It tends to be a long-term process. Prospective business partners and their staff people must commit time and know-how from the beginning. While it is usually an easy "sell" to get agreement, long-term commitment is the challenge.

- **The strongest sites are the result of one person's aggressive efforts to encourage understanding and participation among their own staff, educators, government and other local business partners.**

  Employer relationships occur most readily where a McDonald's franchisee already has developed relationships that lead to local collaboration. Business people need an ongoing forum where they can meet and learn from each other's school-to-work participation.

In the end, the school-to-work story is about providing a full circle of opportunity that customers recognize, understand and champion to others. In the best of all worlds, schools and employers would have the power to involve parents and communities in choices about school and work programs that affect the rest of their children's lives.

Rogercarole Rogers is the Director of Employment Development at McDonald's Corporation. Ms. Rogers directs the McDonald's Youth Apprenticeship Program, a school-to-work process that develops managers for the consumer service industry beginning in high school and ending at the second year of postsecondary education.

A SUSTAINED AND EVOLVING COMMITMENT

by Sharon Knotts Green
Motorola Semiconductor Products

Motorola Semiconductor Products Sector in Austin, Texas has been an advocate for school and business partnerships since its arrival in Austin in 1975. The first Motorola manufacturing facility on Ed Bluestein Boulevard often hosted student tours. The staffing office hired vocational education students for entry-level, part-time administrative positions and engineering departments hired high school summer interns from the Texas Alliance for Minorities in Engineering (TAME) program. When the Greater Austin Chamber of Commerce and Austin Independent School District, (AISD) formed Austin Adopt-A-School in 1983, Motorola was one of the first companies to sign up, agreeing to sponsor five schools. Although some students seemed to have performed real work tasks, the primary motivation for the company's early program appears to have been to exhibit good corporate citizenship.

Motivated by a distinct decline in the quality of its hiring pool, Motorola began establishing programs designed to strengthen the connection between school and the workplace during the early 1990s. Many educators participated in Teachers/ Counselors in Industry, a six- to eight-week summer internship program, which allowed school personnel to experience the modern workplace first-hand. The Motorola Partners for Education in Austin program granted every employee two hours per month of paid time off to volunteer in area schools. The company began Pathways, a substance prevention program for students, to help decrease the number of future applicants who might be denied employment because of failure to pass the company's mandatory drug test.

In more recent years, three other high school student employment programs were piloted: Career Pathways, the Summer Youth Employment Program (run in conjunction with a community group) and the Management Internship Program (a non-paid, exploration program run in conjunction with AISD).

Student and Teacher Issues

One of the most challenging aspects of implementing school-to-work programs was overcoming the by-product of a lack of emphasis on career preparation in public schools. For example, students generally had not participated in career exploration activities or met with a career counselor. Consequently, students could not articulate during an interview their reasons for interest in a particular job or how other life experiences (baby-sitting, school activities) related to the job for which they were applying. Many students also did not seem to know the importance of asking questions, having an attractive application and resume, exhibiting good attendance, working well with others and self-directed learning.

Educators, too, sometimes seemed to lack an understanding of successful workplace behaviors. Applicants to the Teachers in Industry program submitted resumes that were handwritten or had spelling errors. Once on the job, they frequently complained about the low level of formal training they received and were reluctant to seek out

information from those they did not know. Often educators' inadequate knowledge of the workplace was revealed by the type of students they recommended for the various internship programs, preferring well-behaved academic types over average students with a genuine interest.

In short, summer student interns from the same program seemed to network with each other more readily than their teacher counterparts. Teachers were far more adept than students at understanding the relevancy of their summer experiences to the subjects they taught at school. Both groups fell short in the area of taking charge of one's own learning experience. Students as well as educators seemed to feel more comfortable seeking assistance from someone specifically assigned to address participants' issues.

Over the years, Motorola made several program improvements based on feedback from program participants, their hiring managers, school coordinators and Motorola program coordinators. More formal classes (and hence networking opportunities) were added to the curriculum. Every new employee already received training in quality, safety and total customer satisfaction.

In addition, student and teacher interns began receiving training in the SCANS competencies and foundation skills, effective presentations and Motorola's culture. Program leaders developed a more extensive orientation for supervisors. Topics included how to develop a training plan for interns, evaluating participants against the SCANS criteria, giving feedback and setting expectations. The most significant feature of the supervisor orientation was clarifying the company's goals for the program, emphasizing that supervisors are expected to help holistically develop the students knowledge, behaviors and attitudes.

System Building Issues

Two years before the School-to-Work Opportunities Act of 1994 (STWOA) was enacted, Motorola hired its first External Education Manager, thus providing a focal point for the company's collaboration with other entities interested in workforce development. Over the next few years, the External Education Manager served as chair of the Chamber of Commerce's School-to-Work Transition Committee, a member of the High Tech Steering Committee and chair of the Mayor's Task Force on Youth Apprenticeships and Career Pathways. The value of these memberships existed through opportunities for networking, learning about STWOA as it progressed through Congress, reviewing new programs and providing mutual motivation. Because Motorola is the largest private employer in the Austin area and was experienced in student employment programs, the company's involvement in some ways seemed to legitimize school-to-work.

While the aforementioned organizations brought together those who shared an interest in school-to-work, they also brought together those who claimed the same turf. Progress was sometimes slowed because of political undercurrents that were not necessarily known to all committee members. The closer a group came to receiving funds for school-to-work endeavors, the greater the team's turmoil.

Nearly all groups shared the belief that activities should not be put off until everything was perfect, but in hindsight it might have been better to have spent more time coming up with clear philosophical and goal statements. Everyone would have better understood when the entire committee could work together and when an individual group should conduct its own activities. For example, a proposed school-to-work program may not have had all the features needed to cure the student drop out problem, but an

organization focused on drop-out prevention could help set criteria for programs with the larger committee so that at least some of its students would be eligible. The drop-out prevention organization could then focus its program on filling in the gaps.

Another challenge of school-to-work at the systems level was getting the right people around the table at the right time. Schools and businesses have different people for various levels of decisionmaking within a given area of responsibility. The complexity of those on the front lines informing those higher up with enough detail for a decision to be made and sent back down was incredible. Within Motorola alone, implementation of the programs required working with upper management (overall permission), the staffing office (hiring process, payroll, and general orientation), the training department (special classes), the legal department (eligibility and types of tasks allowed), security (badges), department manager (permission to hire), immediate supervisors (define job and supervise), facilities (telephones), information systems (computers and pagers), the health center (drug test) and seemingly countless others. When a city or region is attempting to build a program with common features for all companies involved, the number of meetings required can be mind boggling. Unfortunately, businesses often tired of the meetings or the chief players changed before significant accomplishments were realized.

Changing Corporate Practices Issues

Local employers, especially those in the semiconductor industry, are far more open to changing practices and collaboration now that workforce development issues have reached the point of crisis. Returning to Motorola as an example, high level managers represent the company on a number of newly formed task forces. It is anticipated that the next External Education Manager, formerly a lone-knighter with occasional help from interns, will have a full-time assistant to help coordinate education activities. The vice-president in charge of worldwide manufacturing has approved funding a technology lab for high school students and is willing to pay for personnel to carry out the request. A former vice-president formed the Executive Community College Relations Committee which has already recognized the need for increased involvement with high school students and supporting adjunct professorships.

In order for school-to-work programs to fulfill their potential to be effective workforce development strategies, companies must be willing to invest in these programs for the long haul. Proof of long-term investment would be:

1. the development of formal policy statements in support of school-to-work;
2. funding for program administration staff, program operation, and adjunct professorships;
3. internal recognition or rewards for meaningful contributions by employees to student or teacher programs;
4. hiring processes linked to school-to-work activities;
5. reporting of program outcomes to upper management;
6. general funding protection during economic downturns; and
7. collaborations with school systems to make the effort systemic.

Sharon Knotts Green is the Manager of Texas Education Alliances at Motorola Semiconductor Product. Ms. Green began her career at Motorola as a device engineer in the Advanced Products Research and Development Laboratory studying the application of specific integrated circuits. Currently, she is responsible for the development and implementation of the company's K-12 workforce development strategies. In 1994, Austin Adopt-A-School inducted Motorola into the Hall of Fame and recognized the company's In Industry program as an exemplary teacher internship program.

LINKS IN THE EDUCATION CHAIN

by Jere Hess

Peavey Electronics Corporation

Peavey Electronics Corporation was founded in 1965 Meridian, Mississippi, hometown of the founder and current CEO and Chairman Hartley D. Peavey. He manages the company with his wife, Melia, who is president of the company. With 2,400 employees, Peavey Electronics ranks as the largest manufacturer of musical instruments and portable sound equipment in the United States. Peavey is the only U.S. manufacturer of musical instrumentation and amplification where the founder still owns and actively manages the company. With 32 facilities totaling more than 2.5 million square feet of manufacturing space, it is the only U.S. company that produces every "link in the audio chain." The more than 3,000 products manufactured include guitars, power amplifiers, microphones, drums, loudspeakers and public address systems, and are distributed throughout the U.S. and some 103 other countries around the world.

Peavey Electronics is long-recognized for its products, manufacturing processes and programs established for the education and growth of our most important resource--our employees. We know that increasing the skill levels of our employees is the best way to ensure the company's future growth and prosperity. The training and education efforts outlined here reflect Peavey's commitment to our employees and our future — a future made brighter through lifelong learning and the vitality and spirit of our company. Peavey Electronics not only focuses on its employees but also recognizes that for continued success in the future, there must be an "active" involvement in the education of our youth. Throughout the following pages, evidence of Peavey's collaboration with school teachers, administrators and officials at all levels will be demonstrated to the extent that this type of involvement has and will continue to be of paramount importance at Peavey.

The ultimate objective of Peavey's internal and external education programs is the empowerment of people who work for the company. To be truly empowered requires one to be truly educated and truly trained. To that end, Peavey Electronics has committed its resources.

Education Programs

Peavey is committed to the betterment of its employees. Each cog of the gear represents a beneficial program established to help "Peavey Empowered People" grow within the company. When each cog is utilized, the gear is set into motion, allowing Peavey and its employees to move forward into the future.

Peavey Tuition Refund Program (PTR)

PTR began in the mid-1970s with a partnership between Peavey and a local community college. In 1996, 12 percent of the total work force participated in the program at seven community colleges, three senior colleges and three high school vocational/ technical centers.

Peavey In-House Training (PIT)

PIT began out of necessity early in Peavey's history due to the lack of skills in the electronics technology area. Peavey engineers teach in-house courses on AC/DC, Op Amp, Basic Computer and similar non-job-specific (but necessary) skills for Electronic Technicians, Computer Technicians and Numerical Control Maintenance Technicians.

Job Skills Education Program (JSEP)

Peavey was the first commercial user of this computer-based basic skills program and was selected by the U.S. Departments of Education, Commerce and Defense as a "beta site" to test the civilian version of the JSEP. In partnership with Meridian Community College, this program began in 1989 and has provided training for hundreds of employees to furnish them with the skills needed to keep up with the changing job environment. The success of the program was recognized in 1992 by then-President and Mrs. George Bush in a nationally televised ceremony at the White House. At the time, Hartley and Melia Peavey were one of five recipients presented with the National Literacy Honors Award.

General Education Diploma (GED)

One of the results of our programs such as JSEP and PIT has been the GED program which allows employees the opportunity to earn the equivalency of a high school diploma. Currently, grandmothers are the largest group of individuals taking advantage of this program. Peavey takes special pride in that, knowing that we are providing avenues to obtain a GED for those who would not ordinarily have this opportunity.

Peavey Cooperative Program (PCP)

As Peavey has grown, so too has the demand for engineering and technical services talent. Because it is located in a small Southern city with a largely agricultural and retail sales oriented labor base, Peavey has had, to a large extent, to "grow its own" talent. Utilizing students during their two-year community college program or four-year senior college program, the PCP has served the Company well in using "co-op students" to develop Peavey's future highly skilled employees.

Peavey Adult Continuing Education (PACE)

Because the "college environment," where young students are mixed with adult learners, was not conducive to a large number of Peavey's experienced employees, Peavey formed the Peavey Adult Continuing Education program to free employees from "in-class" intimidation. In just two years, this program has had more than 300 participants and continues to expand at a rapid rate. Classes are held in a college or high school vocational setting, and consist only of Peavey employees--there are no "outsiders" enrolled. This has produced a demand for classes that has outstripped the supply. Each year a "graduation" ceremony is held in the company's modern 225 seat auditorium and each participating employee is presented a PACE pin by Hartley and Melia Peavey.

Peavey Statistical Process Control (PSPC)

As part of a program dedicated to continuous improvement in processes and production at Peavey, an in-house PSPC training series was implemented. It, along with blueprint reading, dimensioning and similar courses, were "Peaveyized" to apply to our needs.

Peavey Pre-Hire Training Program (PPHT)

Beginning in 1988, a new program was added to train and prepare candidates for employment in the various generic and specific skills or tasks that would be necessary for a job with Peavey. PPHT is conducted on the campus of a community college or in a portable classroom on-site at one of the manufacturing locations. Along with training in the JSEP lab, hands-on-training is offered in powered tools, soldering, blueprint reading, mathematics, parts identification, dimensioning and woodworking. Abilities, as well as attitudes, are measured during this two- to ten-week program, and the decision to hire is based on the results.

Peavey Computer Integrated Manufacturing (PCIM)

Peavey Electronics could not operate without e-mail or other similar features both on the

mainframe and networked PCS. To give these important tools to the employees of the company, PCIM was developed. Training in Lotus 1-2-3, e-mail and calendering are among the many programs offered to those who man the company's 800 terminals and 400 networked personal computers.

Peavey School-to-Work Program (PSTW)

As part of the national movement to include businesses in the development and delivery of education, PSTW began in the company's Decatur, Mississippi plant. Beginning with the eleventh grade in the Newton County High School (whose grade seven through twelve classrooms are adjacent to the plant), two students are selected to work in the general maintenance program at the plant during the summer, after school and at other times, based on their interest in the Numerical Control Maintenance and/or Surface Mount Technology in Circuit Board Manufacturing. This program involves mentoring and job shadowing, and leads to a work-based learning program that prepares the students to enter the PES program described below.

Peavey Employee Scholarship Program (PES)

PES provides two scholarships annually, the "Hartley Peavey Scholarship" and the "Melia Peavey Scholarship," to be used toward an AA degree in Numerical Control Maintenance Technology or Electronics Technology. This is a continuation of our providing growth opportunities to the children of existing employees so that a high-skill, high wage job will be available in the future. Peavey takes into consideration the applications of the children of its employees before others are considered.

Peavey/Newton County Cooperative (PNCC)

In January, 1994, the Company initiated an after work training program at one of its plants that employs approximately 400 people in a rural area of Mississippi. The training program began as a partnership with the county K-12 system and the local community college. The training, which includes basic and advanced computers, has a parenting segment in which employees are taught financial management, healthy lifestyles and how to raise children in today's environment. Children of the employees are encouraged to accompany their parents to the center. While the employees are receiving their training, the children are given the opportunity to sharpen their developmental skills, via "Kidware 2" software, and can complete their homework under a tutor's supervision. The children attend a classroom used during the day to train child caregivers, so the surroundings are warm and friendly. With the help of the Department of Public Health and the LPN program at the community college, the children are given eye/ear exams and inoculations on-site. Head Start, The Mississippi Forum on Children and Families, East Central Community College, Mississippi Cooperative Extension Service, Newton County Schools, the Public Health Agency and Peavey combined forces to form the PNCC, which provides a community-based education and training system to meet the needs of Peavey employees. AmeriData Corporation and Center Corporation participated by supplying the computers and software respectively for the kids.

Peavey Dealer Education Program (PDE)

In 1970, Peavey began a "first" in the music and sound business by offering free training to its distribution network of music dealers. Each month, up to forty music store owners and/or employees visit the Peavey Center in Meridian, Mississippi for a week of day and night sessions regarding the latest products, features, selling tips, company philosophy and other information. With PDE, Peavey has set yet another standard, as this program idea has since been adopted by others in the music industry.

Peavey Worship Leader Conference (PWLC)

In 1994, the Company initiated the PWLC to target the rapidly growing Church and Religious Music Market. These week-long seminars are designed to answer the worship leaders' basic questions on sound reinforcement, recording and contemporary keyboards and are held at the Peavey Center in Meridian. Peavey representatives, as well as nationally acclaimed Christian keyboard and vocal artists, conduct the hands-on seminars held in conjunction with one of the leading Christian worship music publishers.

Peavey Teacher Interns (PTI)

Realizing that the education a potential Peavey employee receives in his/her formative years is vital to that prospective employee in the workplace, Peavey Electronics instituted PTI to introduce elementary, secondary and postsecondary teachers to the world of work. During the summer, teachers are placed in a variety of jobs at different plant and office locations. Because Peavey manufactures more than 90 percent of all of the materials utilized in its production process, this offers a unique opportunity to enhance the teachers' knowledge and experiences in a practical sense in almost every known occupational category. Since the international headquarters is located in the same city as 75 percent of the manufacturing capacity and all of the research and development groups, Peavey exposes teachers to a wide variety of situations that require them to think just as a worker does and how a student should.

The components of "lifelong learning" as well as "work-based learning" are reinforced in practical ways so that the teachers see and experience the relative skill requirements that should be taught in schools.

Learn to Work (LTW)

In 1995, Peavey's commitment to the betterment of high school education throughout the nation took a giant step forward when Peavey Director of Education Jere Hess and Mississippi State University Physics Professor, Dr. Sandra Harpole teamed up as CoPrincipal Investigators to obtain a $1.3 million National Science Foundation grant entitled "Transition to the Workplace Through Manufacturing Experiences." This national school-to-work model was for a five-year period and entailed bringing teachers into industrial settings in order for them to learn applications that would benefit their students. Spending time in the different work settings from engineering to quality assurance at Peavey Electronics, teachers from all over the United States are able to utilize practical applications of some of the lessons they teach in the school room. Dubbed LTW, this initiative is exactly that: learning to work. In years past, that factor was one of the foundations of the most productive industrialized nations in the world. Regrettably, learning how to work became a lessor priority in recent times.

Each summer during the five-year period, a total of 48 teachers spend two weeks on the University's campus learning theory and one week in some of the thirty-three locations of Peavey Electronics learning how to apply that theory in practical ways that students can relate to and understand. Teachers from all over the United States can take advantage of this unique three week experience.

Promise

For purposes of this paper, this section will deal with the results of some of the above programs and on issues that need to be handled in the future. Three significant areas show promise and at the same time show some extreme challenges.

The first area is that of our experience with the National Science Foundation grant-funded Learn to Work program So far, some 60 high school teachers have participated in the

program over the last two years. We have learned that the complete lack of knowledge, understanding and exposure of teachers to the "insides" of business and industry is more widespread than we originally thought. There were few exceptions, and those teachers were generally associated with vocational schools or departments. Even these teachers, however, were limited in their understanding of occupations outside of traditional "blue collar" jobs. They were amazed to see and talk with design engineers, purchasing agents, automated test equipment engineers, printing press operators, art directors, machine designers and workers that actually build production machines.

A typical example of what they said are these quotes from John Thyren, teacher at Princeton High School in Princeton, Minnesota: "I am a physics teacher and have been so for three years. I'll be teaching at Wabasha High School next year, but I will teach Physics, Biology, Physical Science, and Electronics."

- **Question: Did you know what the program hoped to achieve when you applied and got accepted?**

  Thyren: "Not really. The way I saw it was they were trying to figure out how to get industry involved in education. What I'm finding out now is that it has been very broad-based. The stuff here at Peavey has been very interesting. As a teacher, you're in your own little world and it is kind of hectic. Every day is a new day, and I make preparations for four different classes. But we tend to lose track of what it is like in the real world, and kids are asking us what do I need to know this for? We usually give them a general answer like, 'Well, it's not so much what you'll be using this for, it's just that we're trying to teach you to be good learners.' Now, by the end of this next year, they're going to be sick of me mentioning the Peavey Electronics, but I'll be able to say, 'At Peavey, we did this and that and saw how they applied it. These people have to be proficient in measuring very precise values and these people use computers for this and that. I can now come back with a specific example of a specific application."

- **Question: What went on at Mississippi State the week before you came to Peavey? Did they prepare you for this week?**

  Thyren: There was some of that. We have many different backgrounds. There were teachers from all areas so they had to give us some basic fundamentals. We built some circuit boards, an amplifier and a speaker, just out of ordinary household items. They didn't sound high fidelity by any means, but it was interesting, and I plan on using it in my classroom as an activity. Another big thing we have been doing is working with the Internet. Back home people would say things about the Internet and I would always say, 'Yeah, I've browsed the Internet, I've surfed the web,' but I have been learning more about that how it works. I spoke with the Webmaster at Peavey and he answered a lot of questions I had--he explained it so well. We have developed our own web pages and they're on the Mississippi State server. Now we are going to go back and do some graphical things and a lot of it will be directly related to our experience here at Peavey. For me this has been an exciting week. I am a guitar player and I own a Peavey amplifier. So to be here for this, it is amazing."

- **Question: What did you think when you heard Peavey was involved in this program?**

  Thyren: "I thought, wow this is right up my alley. I do this kind of thing in the classroom. I write silly little science songs and I talk about guitars and speakers, and the kids like that a lot. So this will just add to my knowledge of all of that. I've never had guts enough to open up the microphones. I have to check them out, so

to actually have the opportunity to go on the line and build one myself and see how the [assembly] line works and how it is designed — it was very exciting! I've seen so many things, that I don't really know how I'll be able to use them yet, but I'll be in the classroom, and someone will asks me a question about why learn this and it will come to me like a light."

Challenge

There is great promise in engaging students in exciting and pertinent learning, but there is so much to be done as evidenced by the lack of business knowledge by teachers. The LTW program will be over in two years and we will have directly impacted only 156 teachers. *If* these teachers do as we plan and secure a business partner in their communities and *if* they participate in an in-service training with *all* of the teachers in the high school in their community, then we will have made some impact on 32,000 teachers, still hardly enough to really make a difference. A similar program must be adopted at the national level and continued in every school district in America.

Promise & Challenge

Peavey is involved with a community-wide effort dubbed Math Matters, the result of a joint effort of employers and community college leaders. Too many potential employees, especially those right out of high school, fail to meet entry level job requirements. The predominant reason for failure is lack of mathematical ability even at a basic level. This is also true in the workplace where the number one reason for someone failing to be promoted is math. A classic example at Peavey is that whenever we begin an in-house class on blueprint reading, invariably we must scrap the first lesson and go back to basic mathematics to prepare the class for the ability to read the dimensions on the blueprints.

Math Matters has embarked on establishing a certification process such that if passed, the individual could be hired by community businesses. If the person does not pass, he cannot be certified and therefore would be ineligible for these jobs. Obviously, the outcome of this venture will have national ramifications, as the problem encountered is no different in any other region of the USA. Models of this type will need to be funded from a national perspective.

Peavey, like most other businesses, has had to take the talent available and train it through programs described in the first part of this essay. We, like most other businesses, are seeking better alternatives. The current methods are expensive and take a lot of time, both of which limit our ability to compete in the global market.

It would seem that what makes sense and is financially beneficial in the long run is for businesses and federal and state governments to join together to make the issue of early childhood training and development the mission for all. The amount of money wasted in retraining and rehabilitating adults can be better used for the long-term betterment of all.

This challenge is a big one that needs study and implementation at the federal, state and local level. Head Start and Title I need to be reinvented with the idea that public education should start at age three and not age five or six. Businesses like Peavey desperately need employable graduates from the public schools they help finance. School-to-work must begin at an earlier age than present programs provide for. Time is running out, since the employees of 12 to 14 years from now, and all those between now and then, have already missed out on many opportunities. Action must be taken now.

Jere Hess is the Director of Public Relations, Education & Training at Peavey Electronics. Mr. Hess serves as a member on several Boards, including the Meridian School District, the Public Education Forum in Mississippi, Meridian Workforce Council and the Public Relations Association of Mississippi.

MERGING THE EUROPEAN AND AMERICAN SYSTEMS

by John P. Tobin

Siemens Corporation

Siemens is the world's sixth largest electrical/electronics manufacturer. It was established in 1847 and is headquartered in Germany; it has 382,000 employees in 190 countries. In the United States it has 47,000 employees at 82 manufacturing and assembly sites with $8 billion in sales. Siemens Stromberg-Carlson, which is headquartered in Boca Raton, Florida and is an operating company of Siemens Corporation in New York City, is a technological and marketing leader in the telecommunications industry. It is the third largest public network supplier in the United States, with approximately 3,100 employees involved in designing, manufacturing and marketing digital central office switching systems, cell switching systems, packet switching systems and fiber-optic transmission products.

In 1991, the Lake Mary, Florida, plant of Siemens Stromberg-Carlson needed technical workers but could not find enough skilled people to fill the jobs. For example, Siemens traditionally hired graduates from a vocational technical school or a community college to fill installation technician positions in demand, but it took up to one year until new employees were able to perform the job well. These employees lacked both theoretical knowledge of telecommunications and practical proficiency in cabling, fastening, troubleshooting, schematics reading and nomenclatures.

Combining the Best of Germany and America

To meet this problem, Siemens has built an education-business partnership that integrates the German "dual system" of apprenticeship training and the American educational system to produce some of the best-trained telecommunications technicians in the country. It combines academics and electronics theory and lab experiences, taught in Seminole County high schools and at Seminole Community College (SCC), with hands-on training at the specially constructed Siemens Apprenticeship Training Center and in the highly technical Siemens factory. High school and college instructors provide education in the schools while a German meister brought from one of the company's German locations provides the training at the Siemens factory and the Siemens Apprenticeship Training Center.

The Siemens-SCC partnership is a combined Tech Prep and youth apprenticeship model. High school seniors do an unpaid internship (five hours a week) at the Siemens apprenticeship lab. Those who complete the internship and are accepted into SCC receive a $1,000 scholarship from Siemens, and the company provides each student with a yearly stipend of about $4,500 for his or her on-the-job training. Students are exempt from paying tuition and lab fees because the program is a registered apprenticeship program, and the state of Florida exempts apprentices from such fees. Siemens estimates it will invest between $18,000 and $20,000 per graduating student over the course of the tech prep program. This investment is less than the on-the-job training costs for a full-time employee.

Students apply for the program through their high school counselors. They are picked on the basis of grades and completion of certain courses. Approximately 20 students are

admitted to the postsecondary program each year. All students of the first three graduating classes have qualified for a full-time job at one of Siemens' 14 U.S. operating companies, in the positions of test technician, manufacturing technician, installation technician, installation specialist, engineer aid, customer engineer and system engineer.

The first three classes of students have outscored their German counterparts in the Siemens exit skills examination. This is the same highly technical performance-based examination administered in Germany by the country's Chamber of Industry and Commerce. The exam (there is a new one each year) covers such areas as measuring digital and analog signals, troubleshooting and repair of an exam unit in accordance with industry standards and producing a project according to blueprints.

Siemens Corporation's Youth Apprenticeship Program has grown to involve 25 sites nationally in 18 cities with 115 high school students and 209 adults. It uses the Lake Mary project model at its five Centers of Excellence, in California, Florida, Georgia, Kentucky and North Carolina.

Program Development

Developing an electronics and telecommunications apprenticeship program that provides a seamless curriculum from high school through job placement has been a challenging yet exciting effort. Even the original electronics apprenticeship curriculum that was brought over from Germany provided a challenge--it was written in German and had to be translated into English. It had, however been "benchmarked" to rigorous international high performance standards.

Preliminary Evaluation

It was easier to work out a youth apprenticeship program agreement in Lake Mary because SCC and the county public high schools already were involved in a Tech Prep program that articulated a student's movement into the community college segment of his education. To "merge" the curriculum for the youth apprenticeship initiative, faculty and administrators from SCC and Stromberg Carlson Public Schools (SCPS) met extensively with Siemens representatives. Each course had to be evaluated not only for each competency but also by level of achievement for each competency. Siemens evaluated the schools' technical courses and its courses in math, science and communications.

After Siemens evaluated the SCC and SCPS electronics/telecommunications facilities, it renovated part of its existing training center into a corresponding lab that would be used to teach specific hands-on skills. Siemens later decided to move the lab to SCC and renovate four classrooms and labs to provide a corporate look that would attract both students and other industry partners. Competitors, customers, vendors and other Siemens companies would prefer to participate in a program that is located at a neutral college site rather than in a corporate-identified Siemens site.

Staff Development

Before the program started, Siemens sponsored and financed a trip to Germany for the SCC and SCPS electronics program managers, who reviewed the German apprenticeship model of training with an eye toward incorporating parts of it into the program. Locally, participating instructors took advantage of staff development workshops in areas such as applied academics and integrating academic and vocational training.

Overcoming Obstacles

Perhaps one of the greatest challenges in developing the system was overcoming the "bureaucratic" restraints of the public

education system to appropriately integrate the needs of business. For instance, the school system had to shorten its timelines to meet the timelines of Siemens. Here are just a few of the issues that had to be addressed:

- Traditional public school schedules had to be modified from 50-minute periods to longer blocks of time to allow for the required on-the-job training at the Siemens factory.
- SCC had to circumvent the normal purchasing procedures so it could outfit its new labs more quickly.
- Typical registration procedures had to be modified to enable program participants to register in groups. There were times when personnel from counseling, admissions and registration went to the Siemens plant to perform these functions with students.
- At the postsecondary level, special classes for math, science and communications were created especially for the Siemens program participants and not listed on the general printed schedule.
- The curriculum outcomes had to meet internationally benchmarked standards — nomenclature had to be changed as did the delivery of training to fit a project/product orientation.

All these tasks were accomplished, but only much planning and communication among all of the partners. Most important, all of the partners had to develop a genuine trust of one another, and their communication had to be totally honest. Working together closely has been and continues to be an essential component of the partnership. Everyone must be willing to keep an open mind and continually search for ways to improve the system.

Working together to hire instructors who were acceptable to both parties has been challenging. Admission criteria requested by Siemens had to be carefully examined to ensure that it was "valid and fair." Some of the students had considerable trouble with the higher-level math courses, and both parties had to arrange for tutors. Through their efforts, the partners were able to develop and implement a seamless school-to-careers electronics and telecommunications program.

Systemic Reform

Systemic reform has been and continues to be a major thrust throughout SCPS and SCC. These institutions already had made many systemic changes to create one of Florida's exemplary Tech Prep systems, and they incorporated even more during the development of the partnership with Siemens. SCPS and SCC have set high academic standards as well as high skill standards for this program.

High school students must complete at least Algebra II and Principles of Technology II. Postsecondary students must have the math skills required to enter college algebra. To obtain a degree they must complete college algebra, trigonometry and general physics.

The educational institutions also are reaching beyond students in the apprenticeship program to enable all students to be successful in some phase of today's highly technological workforce. For instance, SCPS and SCC provide alternative opportunities for students to master math and science skills. Consequently, every high school in Seminole County offers applied math and science courses as an alternative to the traditional "academic" math and science courses. School-to-careers opportunities are made available to every high school student, and every high school program that is part of the Tech Prep system has a defined curriculum with an articulation agreement linking it to a corresponding SCC program.

Siemens fully supports this concept and these efforts because it realizes that a better education system benefits not only students but also employers and the economy in general. Siemens itself will benefit from these efforts because the highly technological field of telecommunications requires all its employees,

not just engineers and technicians, to have a higher level of math and science skills.

John P. Tobin has served as Director of Siemens Applied Technology Training for the past five years. In this capacity, he supports CEO Albert Hoser and the Siemens Presidents' Council in developing youth apprenticeship (school-to-work/school-to-career) type activities, incumbent worker upgrade apprenticeships, community college adult apprenticeships and standards development for these programs.

GIVING STUDENTS A SOLID START

by Kevin Healey

UNUM Corporation

UNUM Corporation is the nation's leading provider of disability insurance products and services, and a provider of employee benefits and long-term care insurance. UNUM believes every graduating student should have the skills, knowledge and experience to pass smoothly from high school to the workplace or postsecondary education. As a member of a statewide coalition for education reform, we have committed to a reform agenda calling upon schools to ensure that every student leaves school with clear goals for their career or continued education as well as the skills and preparation to take the next step. For the past five years, UNUM has helped non-college-bound students prepare for life in the workplace with programs serving young people of different ages in a variety of settings. In the process, we have learned a lot about the challenges these programs present to schools, businesses and students.

In most schools today, students who plan to continue their education at a two- or four-year college can get the support and preparation they need to make the transition. For other students, schools fall short. Many who drop out of school have few plans and little preparation to enter the workplace. Even students who stay in school through graduation frequently leave with no clear plans or solid skills to find and keep a job. UNUM's support for school-to-work programs has helped schools begin to give those students the same solid start offered to college-bound students.

UNUM has taken part in the Maine Career Advantage program since it began in 1992. Each year, we provide four positions for interns, who generally stay with the company through the two-year program. Since many of our jobs involve customer service and claims processing, our interns work along side our regular employees in those areas. In some instances, students have worked in accounting, events planning and other areas of the company. UNUM managers work with the interns' teachers to make sure the workplace experience meets the company's labor needs and the students' academic requirements for grade advancement and graduation. About half of the interns have taken full-time jobs with UNUM at the end of the program.

Through grants from its charitable foundation, UNUM has also supported Jobs for Maine's Graduates (JMG). JMG offers three programs in local schools to serve students from grades six through twelve. UNUM's first grant to JMG helped establish the school-to-work program at Portland High School. This program provides career planning and job competency classes for high school seniors followed by nine months of post-graduation counseling to help young graduates find and keep a job. Another JMG project, the Opportunity Awareness Program, helps keep at-risk freshmen, sophomores and juniors in school. It aims at keeping them engaged in school life while preparing them for graduation with classes in career planning and job-related skill development.

This year a new grant from UNUM helped JMG introduce an early intervention program in one of Portland's middle schools. Project Reach encourages at-risk seventh graders to stay in school. The program steers young students away from risky behavior by helping them understand how the choices and decisions they make can shape their future. It

also provides remedial courses in academic subjects to help students catch up or keep up with their peers. Project Reach specialists provide counseling and even advocacy for their young students to help them cope with particularly stressful and chaotic times.

Lessons Learned

Our involvement with these programs has taught us six valuable lessons about what it takes to start a program, keep it going and measure its success:

- **From the start, everyone involved must believe in the value of the program and take responsibility for its success.**

  It requires a real partnership among business people, students, policy leaders and local educators. They must believe equally in the goals of the program and the sincerity of their partners. Getting programs like these off the ground takes a lot of work and obstacles will crop up. Without a strong team in place, those obstacles become barriers to success.

- **Every partner should commit resources to the program.**

  No single organization or segment of the partnership should carry the whole financial burden. Sharing costs means that all partners have a measurable stake in the program, and it shows that they have institutionalized their commitment.

- **Having the commitment of corporate leaders does not mean that the rest of the business organization will execute.**

  For example, if a program includes bringing students into the workplace as interns or apprentices within the business, one person must have responsibility for selling the idea to company managers, human resource personnel and employees. This should include a thoughtful explanation of why the program matters to the company and assistance for managers and employees incorporating interns into their operation. It also requires recognition that the program may impose an added burden for management training and communication.

- **Make sure you put an evaluation system in place from the start.**

  Having a clear agreement to measure and record the results for students and the business will help sustain a successful program.

- **Make sure you keep the program available to all students.**

  Any program that focuses too narrowly on one group of students can quickly stigmatize participants and discourage other students — who could benefit — from getting involved.

- **Not all students will stay in the program, but that does not make it a failure.**

  In our experience, some students began the two-year internship program but withdrew to begin a college preparation program. The workplace experience gave them a chance to explore one career path. We see it as a success if the experience prompted some students to think about the future and make another choice that seems better suited to their needs and interests.

Kevin Healey is currently the Director of Corporate Public Involvement for UNUM Corporation, headquartered in Portland, Maine. His current responsibilities include the operation of the UNUM Foundation and management of community relations programs in Greater Portland and UNUM subsidiary businesses in the United States, Canada and the United Kingdom.

VOICES OF INTERMEDIARIES

BUILDING A SUPPORT STRUCTURE TAKES TIME

by Mary Dodd
Capital Area Training Foundation

The Capital Area Training Foundation (CATF) was created in April, 1994 by business and community leaders who wanted to build paths to high-wage, high skill careers for young people in the Austin, Texas area. The by-laws of this nonprofit 501(c)3 organization require that at least 67 percent of the Board of Directors be representatives of industry. The Board is chaired by Glenn West, President and CEO of the Greater Austin Chamber of Commerce.

The idea to create a new, employer-led organization to assist in the development of a school-to-work transition system came after five years of study and research by the business community. This interest evolved from a concern for education reform into a realization that the business community must join with educators to co-create a system of education and training that prepares young people for the constantly changing world of work.

The Lyndon B. Johnson School of Public Affairs at the University of Texas (LBJ) was instrumental in bringing to the attention of area business leaders the latest information from around the world regarding school-to-work transitions. LBJ's Dr. Bob Glover and Kenneth Todd developed a research report entitled "Bridging the Gap: Implementing School-to-Work Transition in Austin, Texas," under contract with the Greater Austin Chamber of Commerce, Austin Area Research Organization, the City of Austin and the Austin Independent School District. This report laid the framework for what became the Capital Area Training Foundation. Efforts to create this new organization were greatly enhanced by the enthusiastic support of Mayor Bruce Todd, who called for the establishment of a school-to-work system in Austin after a 1993 visit to the Handwerkskammer, the Chamber of Small-and-Medium-Sized Trades, in Austin's German sister city, Koblenz.

CATF applied for School-to-Work Opportunity grants in the summer of 1994. From October, 1994 through August, 1997, the CATF received just over $1.4 million in Local Partnership grants from the National School-to-Work Office as "venture capital" to build a school-to-work system. CATF also received $40,000 in Urban/Rural Opportunities Grants from the National School-to-Work Office for efforts to ensure that students in the high poverty area attending Johnston High School and its feeder middle and elementary schools are assured access to emerging opportunities. Additional CATF funding is provided by the City of Austin, Travis County and investments from local business.

Student and Teacher Issues

Internships have been the most successful forms of work-based learning to date, perhaps because this is where we have put most of our focus. There is also some interest in exploring week-long job shadowing exercises that are structured to introduce students to real world work environments and case studies.

Internship recruitment is focused on students enrolled in career pathways related to the industry. For instance, students enrolled in the criminal justice academy have opportunities for paid internships with law enforcement agencies and law firms. Students in

electronics programs have opportunities for internships with high-tech manufacturers. Students in marketing co-op, culinary arts and hospitality classes have opportunities for internships with hotels, travel companies and retail stores. This arrangement works for employers because the student interns have established an interest in their industry and are more likely to view the internship as a learning experience, not just a summer job. This arrangement works for students because it gives them practical, real world experiences they can take with them to the classroom in the fall and provides them with work experience and professional contacts that may be useful in the future.

Advanced Micro Devices (AMD), a semi-conductor manufacturer in Austin, has partnered with CATF and two local school districts for the past three years to develop Accelerated Careers in Electronics (ACE). ACE combines an Electronics Tech Prep course sequence with opportunities for paid summer internships and college scholarships. The company has provided more than 70 internships over the past three summers. The Interns participate in three half-day seminars on work-readiness skills before they begin their internships. Once on-site, they attend a full day AMD orientation session. Students and their mentors develop a work plan and students are periodically evaluated on their progress. Mentors receive special training to prepare them for the experience of working with a young student learner. Students and mentors complete separate evaluations of the program so it can be continuously improved. Monthly meetings between all partners keep communication lines open and provide an opportunity to deal with problems as they arise.

CATF and AMD are working together to put the ACE program and all training materials, work plans and other internship information into a format that can be easily adapted for use by other corporations. The goal is that CATF will assume some of the administrative responsibilities of the ACE program and expand it to other schools and high-tech employers. (See pp. 1-2 for additional information on AMD's involvement in school-to-work.)

Lessons Learned About Working With Students

Some of the lessons we have learned about developing successful internship programs are:

- Medium to large size companies should develop a specific process for interviewing, hiring and assimilating interns that is separate from their usual employment process.
- Students gain more from the experience when they have a preparatory seminar that: acclimates them to the corporate culture they are about to enter; surveys some of the work readiness skills they will need to succeed; and encourages them to view the internship as a learning experience, not just a summer job.
- Employer mentor training is very helpful in preparing the supervisors of young people.
- Work plans and periodic reviews of the intern by their supervisor help students know what is expected of them and give them useful feedback.
- A third party, neutral contact is helpful for both the student and employer, intervening when there are problems and offering support and encouragement when needed.

Employers are usually surprised with the students' level of maturity and the extent to which the interns are able to contribute to the company. Employers who follow the suggestions above are much more likely to be interested in continuing or expanding their internship program in future years than are those who attempted to fit interns in through the regular hiring process.

System Building Issues

The industries that have been most active in school-to-work are those that are having the most difficulty finding qualified workers. CATF has organized industry steering committees in the following sectors: construction, criminal justice, high-tech and consumer services (which includes the areas of hospitality, food service, tourism and retail). Employers in these industries have viewed school-to-work as an opportunity to introduce the workforce of tomorrow to the career opportunities and options in their industry. Our best partners see school-to-work as a necessary part of their workforce development strategy rather than a community service. Industry sectors that have been less responsive to school-to-work overtures are those that have undergone significant restructuring, merging and downsizing, such as the health care and the financial services industries.

Building a successful school-to-work system requires a new level of awareness among school personnel and employers. We are very pleased that six individuals who previously worked for CATF as Career Specialists have been hired by various school districts to help implement school-to-work in those districts. When CATF was formed in 1994, we planted the seeds of Career Centers and Career Specialists with schools. These seeds have now taken root in the system. We see this as a success. While we will no longer place CATF staff persons in schools, we will continue to work with schools to support their school-to-work initiatives.

CATF will now focus on building an Employer Support System. We are convinced that the significant changes in attitude and receptiveness to school-to-work on the part of school board members, school administrators, teachers, parents and the community-at-large are due in great part to the unified voice of industry that CATF has helped to foster. Industry sectors can now communicate their common interests to educators, parents and students. Industry steering committees provide employers an opportunity to pool their efforts and target their corporate actions to make changes that will have a lasting impact on their industry.

The Construction Industry Steering Committee created and oversees an adult training program that has resulted in hundreds of new workers for the construction industry and has worked with a high school to develop a construction academy. The High Tech Steering Committee has overseen the establishment of ten new electronics programs as well as new programs in local area networking and engineering design graphics. The Consumer Services Committee hosts Career Fairs for co-op students and students interested in summer internships and is also developing a training program for adults.

The opportunities for communication provided by industry steering committees go both ways. Educators in related areas are included on the Industry Steering Committee rosters and are invited to most meetings. Teachers meet with employers as professional peers who can learn from each other and work together to build a better system.

Employer engagement is critical to ensure that the school-to-work system continuously evolves and changes so that it remains relevant to the real world. If we lose this active employer involvement, school programs are likely to become frozen to the status quo and twenty years from now we will once again find ourselves with an education system that is out of date and out of touch with the economy.

Mary Dodd is an Industry Liaison with the Capital Area Training Foundation, and works with industry groups and schools to develop school-to-work partnerships. Ms. Dodd worked with Advanced Micro Devices to create Accelerated Careers in Electronics program in 1995.

THE CONNECTION FOR ALL STUDENTS

by William Diehl

The Corporation for Business, Work and Learning

The Corporation for Business, Work, and Learning (CBWL) was recently formed through the merger of Bay State Skills Corporation and the Industrial Services Program, two quasi-public agencies established in the 1980s to assist with the economic revitalization of Massachusetts. CBWL is a development, demonstration and technical assistance organization that provides services to promote business modernization, economic growth and opportunities for gainful and fulfilling employment. To this end, CBWL:

- educates, trains and motivates individuals to maximize their productive potential in the workplace;
- assists companies, entrepreneurs and industry groups to be more competitive and to benefit the workforce; and
- designs, tests, and disseminates new approaches to business operations, program delivery, teaching and learning to inform and influence the practices of industry, education and government.

Among other responsibilities, CBWL manages the Massachusetts Manufacturing Partnerships, the New England Suppliers Institute, a number of incumbent and new worker training programs, the JTPA Title II and III programs and the Economic Stabilization Trust. CBWL works with hundreds of manufacturers, service providers, businesses and educational institutions throughout the Commonwealth.

CBWL's Center for Youth Development and Education (CYDE) oversees a number of initiatives in youth development and school-to-work. Since 1992, CYDE has worked with schools and school departments, community organizations, postsecondary institutions, employers and state agencies to promote education reform, build effective school-to-work transition programs and systems and develop models and strategies that serve at-risk and out-of-school youth. Two major efforts in the school-to-work area are Communities and Schools for Career Success (CS^2) and Diploma Plus.

CS^2 is a multi-community initiative, begun in 1992, with funding from private foundations–principally from the DeWitt Wallace-Reader's Digest Fund; the Noyce, Hearst, Aetna and The New England Foundations; and local school districts and state grants. Its mission is to establish enduring connections between middle and high schools and community resources to create a coherent sequence of services and experiences that will help young people make successful transitions to their adult responsibilities of further education, training and employment. The key innovation of CS^2 is the deployment in each community of a small team of intermediaries and change agents, known as "school-community entrepreneurs," to organize, facilitate and support important reform initiatives at the school and school district levels. Consisting of two or three entrepreneurs at the middle and high school levels and one at the school district and community level, the CS^2 teams work closely with broad-based community partnerships, made up of representatives from all the major stakeholding groups in the community — students, parents, teachers, school administrators, businesses, institutions of higher education, cultural institutions, government agencies and community-based organizations.

CYDE supports them through: ongoing training and technical assistance, workshops,

task forces and other opportunities to meet and share ideas, cross-site projects, information about best practice, useful publications, grant opportunities and other resources around the state and country.

CS^2 is currently being implemented by six partnerships involving eight Massachusetts cities. In these six sites, 30 middle and high schools, 127 private companies, 14 institutions of higher education, 43 community-based organizations and a number of other stakeholders are participating *partners* in CS^2. In the last six months of 1996, more than 600 businesses, community-based organizations, cultural institutions and colleges provided new or expanded learning experiences for close to 25,000 students in CS^2-initiated activities. In these six sites, CS^2 is closely connected to the school-to-work efforts, in some cases serving as demonstration sites for the school-to-work partnership and in other cases serving as the convener and staff of the school-to-work partnership.

Diploma Plus, launched in 1996, is targeted specifically at out-of-school and at-risk youth. Currently being implemented in four sites in Boston and under development in several other Massachusetts cities, Diploma Plus is a two-year program that provides an accelerated route to a high school diploma and a bridge to postsecondary education and careers. In the first year, participants master core academic competencies and life skills. In the second (or "plus") year, students concentrate on acquiring the academic, personal and career-related skills necessary for transition after high school. The plus year activities include community college coursework and work-based learning internships or community service placements. Hence, through Diploma Plus and CS^2, CBWL has been directly involved with the design and implementation of school-to-work efforts.

Student and Teacher Issues

Work-Based Experiences

In the sites in which CBWL has been involved with school-to-work, an array of work-based experiences have been instituted. The easiest to plan and implement have been the activities identified by National Employer Leadership Council as "career exploration." Career talks, career fairs, job shadowing and other short-term activities have generally been the easiest to plan and manage from both the employer and school perspective, and the sites have increased student participation in such activities by 75 percent over the last two years (to a participation level of 22,362). While these activities are easiest to plan and implement, they also are short-term and not particularly rich academic or SCANS-based learning experiences.

At the other end of the continuum, work-based experiences lasting for a period of time are rich in experiential learning and are tied directly to school-based academic learning and SCANS skills. They are also the hardest to plan and implement. Our CS^2 sites have substantially increased the number of students (from 380 to 1,966 over a two-year period) involved in ongoing, workplace-related experiences such as internships, mentoring, apprenticeships and classes in which business partners have helped to shape the curriculum, but those experiences are still only available to a relatively small percentage of students.

The major issue in providing work-based experiences is that of scale: given the available resources and employer partners, it is possible to provide short-term career exposure experiences to most students, but it is not possible to provide longer-term, rich work-based learning experiences to more than 15 to 25 percent of students.

Selection, Recruitment, Retention Issues

Massachusetts recently enacted an Education Reform Act that includes rigorous academic standards and a time-and-learning requirement. Schools throughout the state have restructured in order to provide the required time in each of the core disciplines. While the School-to-Work Opportunities Act permits work-based and community-based learning to be counted towards time-and-learning, these experiences must be directly linked to core curriculum areas. These requirements have, in many cases, made it more difficult to recruit students, especially for long-term and intensive work-based experiences. At the same time, many schools have moved to long-block scheduling, and this has allowed greater use of project-based learning and infusion of work-based examples into the curriculum.

In addition, the typical problems of all school-to-work efforts — transportation, liability issues, child labor laws — have presented challenges. In rural areas, lack of transportation and the paucity of available worksites have been major challenges. In several of our partnerships, especially where manufacturing firms are major employers, liability issues posed problems for extensive work-based learning for students. Generally, however, we found that where there was a strong local school-to-work partnership and a commitment from the school district, these problems were surmountable.

The students themselves have rarely presented a challenge in terms of selection, recruitment and retention. In our experience, well-designed work-based learning experiences are of great interest to students, selection can be competitive and students tend to stay in the placement out of their own interest.

In terms of out-of-school and at-risk students, Diploma Plus is aimed directly at linking school-to-work with programs for out-of-school youth. The CS² communities have also been leaders in involving community-based organizations, community education agencies, parents and other community stakeholders in the school-to-work efforts. Springfield's "Provider Network" of CBOs serving at-risk and out-of-school youth, for example, has become a model in the state for how to integrate school-based and community-based efforts around career development activities. This network, which includes such organizations as community centers, rehabilitation agencies, the YWCA and Junior Achievement of Western Massachusetts, as well as programs at Springfield Technical Community College and the Gender Equity Center of Western Massachusetts, provides a range of services — mentoring, information and referrals about career development and health and human services, counseling, tutoring and other extra "connecting activities" — for the most at-risk young people in Springfield. Generally, we have found that quality work-based learning experiences are good motivators for at-risk students and can be a means to re-engage them in academic learning. Additional support services are often needed, however, for these students. Employers also often need additional preparation and coaching in order to work most effectively with these students.

Staff Development

Professional development for educators and curriculum enhancement are two strategies that all CS² and Diploma Plus teams are using to affect major and long-lasting improvements in academic and career outcomes for students. Because of the recently enacted Massachusetts Education Reform Act, and because of significant constraints in establishing a large number of work-based learning experiences, our partnerships have tended to focus on the strategy of integrating career development, SCANS and school-to-work principles into the middle school and high school curriculum. CS² has initiated, or helped to initiate, more than 65 workshops, study groups and curriculum writing groups for teachers. More than 1,100 teachers

participated in these and other CS²-sponsored activities in just the six month period of July, 1996 to January, 1997.

The most important lesson here has been that these efforts need to be closely integrated with the professional and curriculum development efforts already underway in school districts. Staff development in school-to-work has been most successful when school-to-work partners have added value to staff and curriculum development by: (1) the infusion of career development strategies and activities, (2) the promulgation of active learning techniques that are rich in SCANS skills (such as project-based learning), (3) holistic approaches promoting rigorous academic learning and career development at the same time, (4) integrating and enhancing the efforts of what had been separate initiatives (e.g. Massachusetts Education Reform, school-to-work, the statewide math and science reform effort, service-learning) and (5) involving employers and community partners in the process.

System Building Issues

Employer Activity

Across the CS² sites, the employers who have tended to be the most active in system development have been in the health care and financial services industries. Large retail firms and large manufacturers (those with more than 50 employees) have also been active. These are employers who have sufficient resources to devote personnel time to partnership meetings, systemic planning, oversight and time-intensive activities such as curriculum development. Other employment sectors and smaller firms have been active in providing career exposure and workplace learning opportunities. These employers have almost uniformly been willing to participate if the request was specific and tailored to the constraints faced by the employer in doing business. Hence, it often takes more work to involve small employers and results in fewer student placements than with large employers.

In some of our partnership areas, most of the employment is with small manufacturers, retail shops and other small employers. One of the challenges of school-to-work is that these small employers need to be involved to achieve any kind of scale. We find that existing networks of small employers may be the most fruitful way to build involvement. Hence, we are working with networks of small manufacturers, the regional Massachusetts Manufacturing Partnerships, Chambers of Commerce and other existing networks. The challenge here is to get these networks–which were formed to meet important employer goals–to adopt school-to-work as a major strategy to meet some of their workforce development goals.

School-Based Organizational Structures

Many of the CS² high schools have moved towards adopting a career-pathway model as the means to promote participation by all students. This model appears to be the most useful because it can fit with the restructuring occurring at the high schools as part of education reform. None of the schools has fully implemented this model yet, but preliminary work has resulted in many more teachers infusing career development, SCANS and authentic work-based examples into the existing curriculum.

Use of Signaling Standards

Using grades and attendance as standards for participation in work-based learning has been a useful practice in some of our schools. In Springfield, for example, students have found work-based learning placements to be appealing, and there is evidence that students have worked to improve grades and attendance in order to qualify for such placements. At the same time, students in such placements show improvements in attendance at school. The other advantage to using signaling standards is that it provides employers with some assurance that the students who are placed with them will attend, will be on time and will complete assignments.

Issues and Barriers Within the School System

Integrating school-to-work into the schools is a very major issue and one that would require a separate essay to answer adequately. A few of the issues include: (1) teachers do not have enough time, knowledge and/or resources to be active partners in school-to-work development and therefore need release time and professional development opportunities; (2) to address the many competing demands on the school systems and individual teachers, school-to-work needs to be planned and articulated so it is seen as value-added and as an assistance to other efforts, not as "one more demand" on time and resources; and (3) there tends to be the perception on the part of school personnel and some parents that school-to-work is a glorified vocational education program or is an effort aimed only on students not going on to college. To address these issues, school-to-work efforts need to demonstrate value for all students through professional development, support for work-based learning and links to postsecondary institutions.

Improvement in Planning and Implementation

In Massachusetts, a fairly comprehensive and inclusive process has been used for planning and implementing school-to-work at the state and local levels. A great deal of time and effort has been spent building local partnerships, developing awareness and buy-in at all levels, involving other state and local agencies and developing the infrastructure and capacity to design and implement school-to-work systems. More time (and hence, funding) is needed for this infrastructure to start delivering school-to-work programs on a large scale. The state received a five-year grant and local partnerships received three-year grants but more time is needed for the partnerships to become self-sufficient and to achieve wider implementation.

Second, the integration and coordination between school-to-work and other education reform efforts is a critical issue. Massachusetts has taken many steps towards this integration at the state level, but much remains to be done, especially at the community and classroom levels. Increased coordination would help improve many aspects of the planning and implementation processes, such as scheduling, curriculum development, assessment and professional development.

Support Systems Needed by the Employer Community

In addition to school-to-work, the employer community is increasingly being asked to take on new responsibilities, such as welfare-to-work placements and workforce and workplace enhancements, which are necessary for economic survival. If it is to be increasingly involved, the employer community needs the help of intermediary organizations that take responsibility for building and sustaining partnerships with schools, marshaling resources, developing connections between academic and work-based learning, tracking students and student progress, working with employers on mentoring and supervision skills and developing other strategies to carry out the goals and objectives of the school-to-work effort. At the local level, the CS^2 entrepreneurs serve this function.

The employer community also needs intermediary organizations at the regional and state levels that can take the experience gained from building school-to-work systems at the local level to help guide the design and implementation of policies and systems at the state level. The regional and state intermediary can also provide support, technical assistance, training and dissemination of best-practices to the local partners. CS^2 incorporates this creative merging of "bottom-up" and "top-down" approaches through the state-level work of CYDE.

In our experience, organizations and individuals who fill this "intermediary" role at the local and state levels are critical to successful employer involvement and, indeed, to the entire school-to-work effort.

William Diehl, Ed.D., is a Program Manager for the Center for Youth Development and Education (CYDE) of the Corporation for Business, Work and Learning. Mr. Diehl has researched and written articles about best practices in school-to-work and education reform. In addition to his Program Manager role, he also serves as the Western Massachusetts Coordinator for CBWL.

SPANNING A REVOLUATION: CAN IT HAPPEN?

by Robert Gordon
County College of Morris
Morris/Sussex/Warren School-to-Work Consortium

There has not been a nationwide media blitz, at least not yet. But even in the absence of a far-reaching media campaign, many educators have heard of the new initiative called school-to-work.

Unfortunately, the majority of professionals in schools and colleges have little or no idea about the concept, which is supposed to lead to "systemic change" in how young people learn across the grades. When it comes to parents, employers and all the others whose daily lives are not spent teaching or supporting instruction in some way, the level of knowledge about school-to-work approaches the infinitesimal.

Is there any hope, then, that a revolutionary idea which will enjoy a federal financial boost for a scant five years can succeed in radically altering how (and even where) children learn and how they eventually make the transition to the world of work that will occupy much of their adult lives?

Partnerships operating at the local level have the potential to bring about the desired change and develop models that can be replicated by others. One such partnership, the Morris/ Sussex/Warren Consortium in New Jersey, is attempting to turn the dream into reality. It spans three northern counties and numbers 38 high schools and three community colleges among its nearly 100 members. The educational institutions, with community-based agencies and employers, have all agreed to support the goals of school-to-work.

The tri-county region has more than 30,000 public high school students who live in communities ranging from the rural to urban and suburban, and the area is characterized by economic and ethnic diversity.

The consortium has a professional staff of three (two are part-time on the project) and a secretary, and annual budgets have ranged from $175,000 to $298,000. Consequently, delivering on the systemic change envisioned in the legislation has not been easy. After nearly two years of existence, however, there is mounting evidence of success and several specific ventures have the potential to serve as good examples to emulate.

Much of the energy of the small staff has been devoted to curriculum development and staff training. Both endeavors emphasize integrating "real world" activities into the classroom so that students can see how what they have learned is put to use in solving problems and completing tasks which often occur in the work setting. Keeping SCANS skills at the forefront, the training programs for teachers, administrators and counselors depict a world in which all contributors need to collaborate, organize and allocate resources, acquire and use information, employ a variety of systems and be adept at working with technology.

Initially, some teachers and administrators were reluctant to get on board. Some were legitimately concerned about an increase in already heavy workloads. Others said, "It's just the old career education model reintroduced with new packaging--old wine in new bottles." Still others feared that the emphasis on workplace readiness and career planning would impede the primary mission of (some) schools: getting seniors into the most competitive four-year colleges and

Despite the hurdles, each month more member schools seek help and get more immersed in implementing the essential components of school-to-work: school-based learning, work-based learning and connecting activities. Through training and support, they are learning to do so without sacrificing high academic standards. Participating teachers are acknowledging what the researchers are telling them: applied academics enhance learning and improve retention.

The consortium staff is working to facilitate increased work-based opportunities such as apprenticeships, internships, cooperative education, job shadowing and mentoring. But it is the teachers in the individual schools who are reaching out to nearby employers to develop relationships and establish the linkages which will benefit the businesses as well as the students.

Getting employers to come to the table is no easy task. New Jersey's emerging partnerships were told the new initiative would be "employer driven" since, through the SCANS report and other studies, the nation's business leaders were saying they wanted a voice in what students learn and how they are prepared for entry into employment. In an era of downsizing and belt-tightening, however, employers often find it difficult to offer work-based opportunities for students along with the commitment to provide trained workplace mentors to teach and guide the neophytes. Even freeing up a representative to attend a meeting for half a day can be a burden, especially for a small business.

Nonetheless, school-to work is making strides because some employers are eager to join with schools to provide valuable experiences for interested students. The following section describes successful collaborations between schools and employers within the consortium.

Dover/Warner-Lambert Shadow Program

Warner-Lambert, located in Morris Plains, New Jersey, is one of the world's largest producers of pharmaceuticals and consumer products. In a shadowing program involving students from nearby Dover High School, what began as a "pilot" activity has grown to the point where adolescent learners and adult employees are benefiting from a shared experience.

Over a six-week period, participating students are matched with individuals in various divisions of the company for one day each week. Based on interest, the youngsters may be engaged in consumer affairs, product development, legal support or any of a number of other corporate functions. Working in teams, each with a Warner-Lambert mentor as a guide, students learn about the corporate environment and begin to focus on possible career choices. At a culminating "graduation" ceremony, students impress attendees with what they have learned by displaying products and packaging they have created, backed up by their own marketing and financial plans.

The teenagers' enthusiasm and excitement are evident and their corporate mentors beam with pride, knowing they have provided a learning experience which cannot be duplicated in the classroom.

Understanding American Business

An important facet of school-to-work is entrepreneurship. How business functions is often a mystery to adolescents and most acquire few insights during the course of formal education. To offer at least some young people an intensive experience in understanding business, the consortium partners with the Morris County Chamber of Commerce and several key businesses, most prominently ATT Capital Corporation of

Morristown, to offer a three-day comprehensive summer conference for high school juniors and seniors. The purpose is to enlighten the students about the "real world" of business.

Volunteers from area employers began the 1997 summer session by teaching the 60 student attendees about team building, marketing and advertising, business/financial planning and customer relations. Working in teams, participants were charged with developing a product or service from beginning to end by applying the knowledge and skills learned earlier in the session. They then presented their work to a panel of distinguished community business leaders who judged their efforts on the basis of product, strategy, financial solvency, teamwork and overall understanding of the American business system. Students worked for three days in a corporate environment where they also observed entrepreneurship in action through the courtesy of ATT Capital.

Warren County Shadowing Program

Job shadowing, in which a student follows an employee at a firm for one or more days to learn about a particular occupation or industry, helps young people explore a range of career opportunities.

In Warren County, a business and education alliance was formed to link employers and high schools with the primary objective of offering shadowing opportunities. Joining all seven high schools in the county were employers ranging from a candy maker, M&M/Mars, to a locally- based insurance agent, Bowers, Schumann and Welch. More than 25 business sites have been made available for the daily six hour experiences that interested students select.

Overcoming the inevitable obstacles of transportation and extensive commitments, many area students opt to "sample" careers by observing plant managers, engineers, systems specialists and a host of others who work for the county's large, medium and small employers.

The program continues to grow in large measure because students recommend it to their friends!

Latino Mentoring Program

National guidelines make it clear that school-to-work is for all students. Consequently, outreach to minorities and other "special populations" is essential. To reach Latino students in partner schools, the consortium enlisted the help of the United Latino Organization of students based at the County College of Morris. CCM is one of three participating community colleges. Also contacted was the Morris County Office of Hispanic Affairs, one of more than a dozen community-based agencies supporting the partnership.

Many of the targeted students had little or no access to computers beyond some limited classroom applications. The consortium agreed to purchase five PCs with a printer, software and network connections, but needed a location accessible to teenagers after school and in the evening. Summit Bank, with a large branch office on Dover's main street, offered an adjacent "storefront" room of more than 1,000 square feet. Since the town has a significant Hispanic population, many of the interested students could walk to their new computer center.

To augment the project, Xerox Corporation (with a facility in Morris Plains) supplied volunteer instructors to go to the Dover Center and hosted field trips and mentoring services at its site. Another business has offered to fund Internet access so that all stations in the lab can facilitate web searches, e-mail and other functions.

Now that they have learned some skills, students are contracting with small businesses in the area to develop advertising material--in English *and* Spanish. Soon they hope to create web pages as well.

Conclusion

While the aforementioned activities have benefited area students and are made possible by significant contributions from local employers, more is needed. Success breeds success, however, and as business leaders read and learn about what is already occurring, others will seek to join the effort.

To keep the ball rolling, school-to-work and school-to-career advocates must make contact with and convince employers that they have a stake in this comprehensive approach to improved workforce readiness.

All concerned must realize that this initiative promises to create the competent and skilled individuals needed to sustain the American economy.

Plans For The Future

Participants are well aware that the federal funds earmarked for school-to-work will decline each year and then evaporate completely at the conclusion of the fifth year. They also know that the concepts, especially career awareness and career exploration, must reach students before they enter high school. To expand the delivery of school-to-work and school-to-careers, and to compensate for the loss of grant funds, the following plans are in development:

- implementation of school-to-careers courses on an elective or required basis in member high schools;
- development of comprehensive career awareness and career exploration curricula for the primary and middle school grades, respectively;
- expansion of applied academics across the grades;
- additional outreach to secure the "buy-in" of superintendents and boards of education in comprehensive academic high schools;
- enlistment of PTAs and other parent groups through training and information programs;
- involvement of students in planning future direction of school-to-work;
- consideration of cost sharing among member schools for services previously funded by the federal grant, such as: printing, training and staff development, curriculum development, consultation and support.
- Exploration of other funding sources such as welfare-to-work, block grants and privately funded grant programs; and
- establishment of a foundation using contributions from businesses and others to sustain the effort.

Since all of the funded partnerships are confronting similar problems in the face of temporary financial support, continued exchange of ideas is essential. The real test will be to demonstrate to the American public that high academic standards are being nurtured and maintained as an integral component of career preparedness and workplace readiness.

Robert L. Gordon is an Assistant Project Director at the Morris/Sussex/Warren School-to-Work Consortium, through the County College of Morris.

DEVELOPING A SEQUENCE OF ACTIONS

by Jeffrey M. Vega
New Brunswick Tomorrow

In 1994, New Brunswick Tomorrow (NBT), in collaboration with the National Alliance of Business, Johnson and Johnson, the New Brunswick Public Schools, the City of New Brunswick and a variety of community development partners, prepared and submitted a collective response to the request for proposals by the New Jersey Department of Education describing our approach to building a successful school-to-work initiative in New Brunswick. The following year the proposal was accepted and funded. Now only in its second year of implementation, the New Brunswick school-to-work initiative is widely considered to be a successful and model program.

Background

Established in 1975, NBT has evolved from a predominately physical planning and economic development agency to one that focuses specifically on meeting the social and human needs that exist within our small, urban community of approximately 44,000 people. NBT is currently governed by a 30 member board of directors, stratified into seven smaller, more manageable task forces. Each task force is organized around a component of the human life cycle, allowing for a truly "holistic" approach to the identification, analysis and implementation of programs that seek to address the most pressing problems affecting the most vulnerable members of our community. Each of our task forces, along with a finance and executive committee, convene each month to prioritize the issues specific to their individual mission and to present their collective recommendations to our full board of directors.

While this is a fairly typical governance structure, it is the uniqueness of the task forces and the impressive array of individuals that comprise these groups that truly distinguishes our organization. At present, NBT attracts more than 200 volunteers to our process in support of our overall mission. These individuals and their collective contribution to our holistic process has helped to produce a compassionate and comprehensive vehicle for the efficient assessment, evaluation and implementation of our social and community service programs. The community collaboration process enabled relationships among private, governmental and public institutions. It is the strength and success of the task force structure, in combination this collaboration, that has helped to establish NBT as the model for an effective and proactive community-based organization.

New Brunswick School-to-Work Initiative

The first step in the process of developing a specific and comprehensive school-to-work strategy began with an extensive analysis of all existing educational and job training programs within our community. Conducted collectively by our local partnership, this exercise revealed an impressive and existing foundation on which to both build and implement our school-to-work initiative. Each component of the model, from school-based to work-based learning and all associated connecting activities, was carefully conceived and integrated into the New Brunswick system. Today, through the continued guidance and support of the local community partnership, the New Brunswick school-to-work initiative

continues its constant monitoring and refinement in search of continual programmatic improvement.

School-Based Component

Initial partnership meetings revealed an immediate need for reform, as representatives from New Brunswick Public Schools clearly articulated the need to change the process utilized to prepare students for the world of work. Guidance counselors and teachers eagerly identified two immediate and simultaneous priorities: the creation of a state of the art career center and the engagement of a career development specialist.

Reacting to the challenge, the partnership set out to design a career center that would both inspire and instruct, supplying up-to-date career and employment information through cutting edge technology and support. Capturing a large space just off the entrance of the high school and directly across from the library, the new career center features 14 computers equipped with pentium processors, internal modems, CD-ROM drives and a full complement of career development software. A television monitor hooked up to a VCR facilitates the broadcast of an extensive library of career oriented videos and a variety of visual reference materials. The room is also inspiring in its design, decorated with an assortment of encouraging education and employment posters. The entire career center environment is supported by a full-time career counselor who works directly with individual subject teachers who schedule group or private lessons for their students. Freshman students receive their career development lessons within their structured English classes. Sophomores are enrolled in a half-year career development course taught directly at the career center. Juniors receive their instruction through their Health course and seniors work more independently, and are required to satisfy a variety of responsibilities on their own time. In addition to full time curriculum support, all students are encouraged to visit the center independently, either during lunch or after school.

Emphasis on the concurrent school-to-work objective to impact every student in the system and not just the high school population was strongly supported by the local partnership. To achieve this goal, an experienced Curriculum Coordinator was hired to develop an appropriate and age specific school-based curriculum. Fueled by the enthusiastic assistance provided by our teachers, department supervisors and administrators, a comprehensive, developmental career curriculum was designed, placed and tested initially on a small percentage of kindergarten through eighth grade students. The results of this study were evaluated after the first year and refined over the course of the summer. By the start of the second year of the program, each of New Brunswick's 3,700 public school students enrolled in the eight elementary schools began their formal introduction to the concept and importance of work and career objectives.

To consistently monitor and chart individual progress, a career portfolio is established and made part of each student's official record. In this way, a more comprehensive and longitudinal evaluation of personal success can be determined. Close supervision of the student's career development progression from elementary to high school will greatly assist guidance and career counselors in their ultimate goals of achieving workplace success for all of our students.

Work-Based Component

The fundamental tenet of the work-based component of school-to-work is to link on-the-job experience with each student's educational plan. In this way, the correlation between education and work becomes much more obvious and self motivating. Relevant worksite experience, however, is often difficult to achieve, given the spatial mismatch between suburban employment opportunities

and our urban-based population. Fortunately, New Brunswick is experiencing an economic renaissance on the strength of its unique position in the New Jersey economy, facilitating a wealth of opportunity for our students.

Earning a national reputation as a "Health Care City," New Brunswick is home to two of the world's largest multi-national pharmaceutical companies, Johnson & Johnson and Bristol-Myers Squibb. In addition, two major and progressive medical institutions, St. Peter's Medical Center and Robert Wood Johnson (RWJ) University Hospital, attract more than a million visitors a year to our small urban community. Each of these institutions are in turn serviced by the largest medical school in the country, the University of Medicine and Dentistry of New Jersey-Robert Wood Johnson Medical School. Equally important and critical to the provision of health care in the city are three community-based health clinics, the Eric B. Chandler Health Center, St. Peter's Family Health Center and St. John's Family Health Center. It was, therefore, both obvious and logical to designate the allied health field as the first career cluster to pursue.

This decision was reinforced by the success of the Health Professions Scholars model, an award-winning employment and academic partnership between the RWJ University Hospital and the New Brunswick Public Schools. RWJ University Hospital not only provides the paid worksite experience for the students but also worksite mentors as well. Invaluable assistance in curriculum development and coordination is also provided by the hospital. This program engages 70 students from grades eight through twelve in a variety of health related activities both during the academic year and the summer. Junior and Senior Health Scholars participate in paid work-based experiences and seminars, while students who are younger and not yet eligible to work attend workshops. The diversity of topics, ranging from Respiratory Education, Laboratory Education and Cardiac Rehabilitation, in combination with the fast paced environment of the hospital, provides each of the scholars with a broad exposure to the dynamics and opportunities of the health care industry.

Now in our second year of implementation, the local partnership has added two additional career clusters to our work-based program. An analysis of regional labor demands as determined by our local Workforce Investment Board (formerly the Private Industry Council) has led to the selection and inclusion of both the FIRE (Finance, Insurance and Real Estate) and the Retail & Hospitality sectors into the program. Utilizing the Health Professions Scholars program as our model, a full-time job developer was hired in each sector to begin the process of cultivating potential business relationships with area employers. For example, in the FIRE industry, a series of focus groups and roundtable discussions were conducted to determine the issues central to potential employer participation. Once determined, a concerted effort to recruit local and area banks, real estate brokers and insurance agencies was launched. An immediate commitment of participation by one local financial institution, CoreStates Bank, helped inaugurate this segment of the program through the establishment of the CoreStates Scholars Institute. This innovative program is designed to provide multiple employment opportunities within the bank's two central city branches, while rewarding two participating students who exhibit both their academic and banking proficiency with a college scholarship.

Connecting Activities

Since the program's inception, the priority of the partnership has been to encourage community activities that foster and strengthen the connection between school and work. The following are a few of the many examples of that commitment:

- A-STEP, The Alliance for Successful Teen Employment Program, which was

highlighted at the 1996 Statewide school-to-work Conference and successfully placed 258 youth in jobs in 1996-97;
- providing child care and transportation for teen mothers to support their participation in the work-based learning component;
- creating a "re-engagement program" to encourage student dropouts to return to school or enter a job training program;
- working with the Greater Raritan Workforce Investment Board's industry focus groups to determine labor demands in this area;
- assisting the Greater Raritan Workforce Investment Board in implementing an interactive "Forum for Educators and Employers," held in 1997;
- promoting school-to-work successes at the New Brunswick Board of Education meetings;
- introducing parents to the school-to-work initiative by inviting them to sample the services of the career center;
- developing a brochure designed to recruit employers for the initiative;
- participating in a taping of the state's school-to-work promotional video;
- presenting the comprehensive career development curriculum at the state school-to-work conference;
- organizing an employer breakfast; and
- taking students to the Middlesex County College Job Fair to meet employers.

To determine true effectiveness, NBT is developing an evaluation model to measure the impact of this program. In collaboration with the Center for Urban Policy Research at Rutgers University, data on the services provided under school-to-work will be collected and analyzed. A full report will be available in August, 1998.

Conclusion

NBT, through the local community partnership, has achieved remarkable success in its collective ability to facilitate real systemic change in our public schools. As described earlier, the career center and the comprehensive K-12 career development curriculum has now been institutionalized within the Board of Education's annual budget, with paid staff directly responsible for the delivery of career development services to all students. Support for the initiative is universal, as teachers and administrators who played a critical role in the formation of the curriculum possess a real sense of ownership of both the initiative and process. As a result, the system is now ready to meet the lone remaining challenge of integrating the work-based component into the school's curriculum. To achieve success in this effort, a plan to fully engage the cooperation of the entire business community is currently underway.

Jeffrey M. Vega is Vice President of New Brunswick Tomorrow, a non-profit organization in the City of New Brunswick, New Jersey. He is responsible for the city's social and human services revitalization process and works with more than 200 community volunteers in developing social services and educational programs which allow all residents to achieve economic self-sufficiency.

NEW SERVICE INNOVATIONS ARE REQUIRED

by Mimi Bushman
Oregon Business Council

Oregon's business leaders are working to transform public education. The Oregon Business Council (OBC) is a statewide nonprofit, nonpartisan and independent organization of 43 top Oregon business leaders. Modeled after the national Business Roundtable and similar groups in other states, OBC's mission is to contribute to Oregon's long-term social and economic well being. Toward this end, OBC directors commit their time, knowledge and leadership, as well as the resources of their companies, to studying and acting upon the serious challenges facing Oregon.

Because of the linkage between education, workforce quality, economic competitiveness and social cohesion, improving Oregon's K-12 and higher education systems are high priorities for OBC. In particular, OBC has been a leader in supporting implementation of the Oregon Educational Act for the 21st Century, a revolutionary restructuring of public K-12 education in Oregon. The Act calls for very high standards of student achievement and a new assessment system. A key strategy to achieve these high standards and improve the relevance of education is school-to-work, which begins with career awareness activities and special projects in grade school and escalates to work experiences linked to related curriculum in high school and postsecondary institutions.

The commitment of Oregon's business leaders to education has made a significant difference in preserving and implementing Oregon's reform legislation. Without business support in the 1995 and 1997 legislative sessions, the Act probably would have succumbed to threats of repeal from small but vocal factions opposed to standards-based reform. Today, business has turned its attention to leading the implementation effort. Keith Thomson, Oregon's site manager for Intel, the world's largest manufacturer of microprocessors, chairs OBC's education task force and a thirty-member statewide school transformation advisory council, which includes four additional business leaders as members. The council oversees the efforts of a cross-institutional team charged with developing a detailed plan for reform. This team, which was formed based on recommendations from a business-led task force, is chaired by the governor's education reform team leader and includes representatives of the Department of Education, the State System of Higher Education, the Office of Community College Services and business.

Employers Care about Education because Workforce Skills are Critical to their Success

Educational transformation — tougher, more relevant academic content and work readiness skills like teamwork, communications and problem solving — is critical to creating a workforce responsive to the needs of today's global economy. In a 1996 OBC study, firms across Oregon stated that workers are the key to competitiveness and the number one factor for business success. Employers said that it is time to rewrite the book on career preparation, blending separate volumes on school years and work years into a seamless whole called lifelong learning. They agreed that employee skill levels, attitudes, adaptability and access to training are directly

related to productivity, profits and increased wages. Nearly all also believe that weaknesses in the traditional system of K-12 and higher education are holding them back. Statements from the 33 focus groups, which represented a diverse cross-section of the Oregon economy across business sectors, were powerful and surprisingly consistent, with many echoing the sentiment expressed by one manufacturer: "We'll fail if the workforce is not flexible, adaptable and able to change on a continuous basis. The jobs we have today are likely to change every few weeks or months." Another employer captured the importance of the school-to-work model in meeting these needs: "Kids need more exposure to what the opportunities and choices are out in the job market. There should be more partnerships with business and more apprenticeships. Kids need more early hands-on experiences with work."

Employers recognize that they are half of the equation in successful school-to-work experiences, and OBC-member companies *want* to reach out to education. To date, 30 companies have appointed an internal school-to-work coordinator to help create and implement school-to-work strategies within their firms and work with schools on curriculum, industry-related standards, professional development of educators and other elements of school reform.

Worksite 21 is Helping Employers Build Capacity to Support School-to-Work Across the State

Refining and enhancing the role of employers in education is one of the most essential elements in the development of a stronger workforce. OBC organized a 501(c)3 organization, capable of receiving grant funds as well as giving focus to this critical issue, called Worksite 21. Given the tremendous scope of educational change in Oregon, the aggressive timeline for implementation and the objective of school-to-work experiences being provided for *all* students — college- and non-college-bound, high achievers, at-risk youth, urban and rural students and those with special needs — it is imperative that employers put their school-to-work support systems in place immediately and effectively, learning from each other and sharing best practices along the way. Worksite 21 is providing consulting assistance, networking opportunities and support materials to help OBC companies reach four goals:

1. educate their employees about school transformation and school-to-work,
2. participate with educators to redesign school systems,
3. value standards and assessments in hiring and
4. open doors to teachers and students for a variety of school-to-work opportunities.

The following describes the accomplishments of Worksite 21 during its first year.

The Barometer of Education Reform and School-To-Work Activity

This quantifies employer involvement in activities ranging from classroom speakers and job shadows to teacher internships. The barometer shows that OBC companies provided 13,000 opportunities statewide between January 1, 1996 and June 30, 1996. An update of the barometer, reflecting activity during the 1996-97 school year, is currently underway. The barometer, which captures 12 data points at each company, also measures support for statewide education policy reform. This helpful reporting tool allows OBC to assess its progress in meeting school-to-work goals and understand the challenges that remain to Oregon employers in providing school-to-work opportunities in adequate numbers for all students.

Briefing Packets for Employees

Packets include 18 fact sheets explaining Oregon's education reform goals; answering

frequently asked questions about liability, child labor laws and other issues connected with having students in the workplace; and principles for setting up successful school-to-work experiences in eight categories. These fact sheets are particularly helpful in enabling school-to-work coordinators to recruit new managers and staff to host students and teachers in the workplace.

A Modular Presentation Package

The Package helps explain school-to-work, Worksite 21 and the importance of workforce preparation to management, employees, board members and others associated with school-to-work within OBC companies. The package, which is partially customized for each employer, includes color slides or overheads, a script and technical assistance to allow school-to-work coordinators to further customize or add to the presentation materials for their companies.

Quality Teams

Students and teachers work with employers in intensive seven-day experiences designed to solve real business problems using quality improvement principles. In an ongoing program, 11 teams met this summer, with seven tackling school-to-work issues within their host companies. Team training provides problem solving, critical thinking and communication tools, then places the teams at worksites to apply these tools in authentic business environments. Teams present their findings to employers using learned presentation skills, providing them with valuable experience.

A Scale Analysis

The Scale Analysis examines the number of job shadows and internships needed to serve Oregon students and teachers. Using existing demographic and employer participation information, it looks at school-to-work participation by size and type of employer to create a model for setting more detailed employer participation targets and predicts participation by non-OBC member companies.

In addition, Worksite 21 is providing valuable consulting assistance to help individual employers make the connection between participation in school-to-work and their own competitive business needs at all levels within an organization. Assistance includes assessing employer readiness to participate in school-to-work, helping establish or strengthen relationships between employers and schools in local communities, recommending organizational adjustments employers need to make to accommodate students and teachers and creating plans to increase school-to-work involvement.

Employers have made it clear that opportunities to share information, including case studies of successful school-to-work partnerships between employers and schools, is valuable and necessary to building capacity. Therefore, Worksite 21 provides regular opportunities for school-to-work coordinators to come together to brainstorm and gain new information. The strength of the program lies in the credibility and peer influence that a business-led effort has with employers and the leverage that employers have to insist that schools link school-to-work programs with the high standards embodied in Oregon school reform. It is a unique model of leadership in that the employer community is taking responsibility for supporting Oregon school reform, higher standards, school-to-work and partnerships with schools.

Deep-Rooted Business Involvement in School-to-Work is Critical to Meaningful Change

OBC and Worksite 21 have the advantage of several years of intensive experience in school-to-work and have gleaned many lessons from the experiences of Oregon's top employers. In 1993, OBC "adopted" an entire

school district to help pilot high standards, new curriculum and work-based learning opportunities. Since then, many more school and employer partnerships have developed at the elementary, middle and high school levels. The collective wisdom of employers, educators, government and community leaders working together to institutionalize school-to-work demonstrates the necessity of strong employer commitment and participation. Their experiences have taught them a number of lessons, described below.

- **An employer's school-to-work plan must be compatible with the firm's overall mission.**

  One of OBC's health system members often states that school-to-work is "the right thing to do" because it contributes to the health of the community in ways which are compatible with their values. In addition, companies need to find school-to-work strategies that help them meet their own bottom line goals. For example, several high-tech member companies particularly value school-to-work projects that relate to their immediate workforce needs.

- **School-to-work support systems like Worksite 21 should first address employer understanding of the benefits of school-to-work to the organization's competitiveness.**

  Once the *why* of school-to-work is clearly understood, then support systems can address the *what* and *how* of school-to-work programs and projects. Communication tools designed to address each of these questions are currently being tested within OBC companies.

- **Employer support for school-to-work should be broad and deep.**

  It is imperative that top management support the involvement of middle managers and their staffs in the day-to-day activities of school-to-work. Those actually hosting students in job shadows, mentorships and internships say that they receive tremendous personal satisfaction from working with young people, but they want to know that the time they spend is considered a valuable and legitimate part of their job.

- **If employers are to value new assessments (such as the CIM and CAM), it is important that business get involved and stay involved with the creation of academic content and career-related standards, proficiency standards and assessment instruments.**

  Employers must also determine how they will value and use the new assessments in their hiring processes. A group of seven human resource professionals are crafting a position statement for promulgation within OBC companies, and eventually, for consideration by employers and schools statewide.

Effective Partnerships will Provide the Foundation for Education Transformation

Worksite 21 acts as a catalyst to bring schools and employers together in a new kind of partnership. The following lessons outline strategies utilized to obtain the support of these two key partners.

- **The key to successful relationships between employers and schools is personal commitment and trust.**

  OBC and Worksite 21 experiences with school partnerships and quality teams show that it takes time to strike the right match between employer and school. There are definite cultures within both kinds of organizations, and true partnership means compatibility between cultures. Achieving this level of partnership is one of the biggest barriers to school-to-work. Too often,

educators view the employer's role in the traditional sense — as a contributor of equipment or a sponsor of athletic teams. Few educators are accustomed to working with employers as partners, not merely advisors, and some are reluctant to accept employers in this role. Employer partners, however, expect their input to be valued. School-to-work means that communities become classrooms. Indeed, Oregon's education transformation plan calls for the entire community to become responsible for youth. Every school is now overseen by a site council which, in addition to educators, includes parents and others concerned with the welfare of children.

- **Career clusters serve as an organizing mechanism for industry/school partnerships.**

  Oregon's CAM allows for the integration of academic and career-related learning in six endorsement areas: (1) Arts and Communication, (2) Business Management, (3) Health Services, (4) Human Resources, (5) Industrial and Engineering Systems and (6) Natural Resource Systems. High schools are developing curriculum and school-to-work activities in one or more of these clusters, leading to natural partnerships with employers based in these industries. These partnerships, in turn, are driving the curriculum redesign necessary to meet Oregon's new academic and career-related standards.

- **Many Oregon businesses have already become converts to the benefits of quality management and other proven tools of corporate restructuring.**

  Employer partners bring valuable knowledge and support to schools needing to restructure themselves. OBC hopes to facilitate the adoption of more school clusters (high schools and their feeder schools) by key corporate partners, who will commit their resources — such as quality consultants and trainers — to help the school clusters evolve and reorganize to better meet the key elements of the Oregon Educational Act for the 21st Century.

- **Change happens at the school building level.**

  Charismatic champions of school-to-work and curriculum redesign are absolutely central to building sustainable programs. These champions need tools in change management, contextual learning and all elements of reform to build support and create a critical mass of educators within each school teacher by teacher. An important professional development strategy in the Portland area has been school-based teams of educators called *leadership teams*. In May, 1977, 29 leadership teams (totaling 149 members) spent a full day with business and community partners addressing how to use school-to-work strategies to meet the new CIM and CAM standards.

- **Bringing students into the workplace is obviously necessary and valuable, but teachers must also experience the world of work.**

  Teacher site visits, job shadows, and internships ultimately affect students achievement and performance. As one OBC member likes to say: "Spend a day with a student, and you may change a kid. Spend a day with a teacher, and you may change a hundred kids." Worksite experiences for teachers are perceived to be highly valuable if they occur at the employer's location, allow exposure to a variety of professions and skill levels, and ensure time for teachers to apply their learning to curriculum redesign — preferably in a team structure.

89

OBC and Worksite 21 have Helped Set the Stage for Going to Scale

OBC companies and other employers have been particularly active in providing school-to-work opportunities for students in the Portland metropolitan area of Washington, Multnomah and Clackamas Counties. During the 1996-97 school year, more than 25,600 high school students alone participated in community-based learning in this region. Currently, more worksite opportunities exist than can be filled. The following lessons have been identified through Oregon's efforts to expand school-to-work across the state.

- **Schools have to continue to gear up the preparation of students for school-to-work.**

  Teachers are requiring very high standards of behavior and preparation before a student is sent to a job site. For example, David Douglas High School students must have a "perfect" resume before they are released for job shadows. High expectations are currently limiting student eligibility to participate, but as teachers in lower grades become more aware of the higher standards and start to prepare students to meet them, the number of eligible youth is expected to rise. Another barrier to full participation for students is school structure, such as 40 minute periods and difficulties with students missing classes for time spent learning outside the classroom. But success breeds success, and schools which have the most experience in community-based learning are the schools which have worked up to the highest levels of participation. There are several high schools in the Portland area where 90 percent or more of the student population is participating in school-to-work.

- **As schools gear up the demand side of work-based learning (better structures and more prepared students), employers will need to increase the supply side (job shadows, tours, internships and other opportunities).**

  A recently completed employer scale analysis confirmed assumptions that firm size is a critical factor in predicting school-to-work participation. In Oregon, large firms are more likely to participate, although capacity for school-to-work is not linearly related to size. As time goes on, it will become important to develop strategies to engage more small firms. The capacity of smaller firms, once they are involved, has been underestimated.

- **Brief and relatively undemanding experiences such as job shadows have been promoted successfully in Oregon.**

  The scale analysis showed that it will be important to increase the *intensity* of firm participation, such as helping employers offer some of the more demanding activities like internships. A working assumption is that employers who have positive experiences in less intense activities can then be recruited to provide lengthier, more in-depth experiences.

- **It will be important to help employers expand the *volume* of work experiences they offer.**

  Ninety percent of employers that offer internships (both large and smaller firms) work with only one student at a time. Lengthier activities such as quality teams are well received by employers if they are structured and organized on the school side and if the work being done addresses skills gaps identified by employers.

Final Thoughts

Oregon's K-12 education transformation is part of the state's vision for a seamless training system to support lifelong learning. Employers

are playing a critical role in the transformation process, helping Oregon blur the lines between school years and career years to create a smoother transition from school to work and successful adulthood. Worksite 21's technical assistance for employers is a vital tool to bring these transformation efforts to scale, where the goal is school-to-work for *all* of Oregon's students.

A 1996 report to the governor on Oregon's progress in implementing CIM and CAM achievement standards stated that the work that needs to be done and the leadership needed to do it cannot be provided by the Oregon Department of Education or the K-12 system alone. System-wide school improvement requires a shared vision and unprecedented cooperation that transcends individual organizations and institutions.

The role of employers as major stakeholders in education is absolutely critical to maintaining momentum in school-to-work and enacting systemic change. Individual employers have been great champions of reform and their contributions are noteworthy, but Oregon will need a much larger share of its employers if transformation is to reach all students. Smaller employers will need technical assistance to get started and all employers, large and small, will benefit from cooperative efforts that help them develop successful strategies and learn from one another. Jim Harper, chair of Worksite 21's advisory committee and director of human resources for Wacker Siltronic Corporation, a leading manufacturer of high technology silicon wafers, explains:

> "Wacker recognizes education and training as a lifetime experience. Our work with education is a key part of our long-term strategy to maintain our competitive edge. Worksite 21 has shown employers the tremendous potential of a service focused on helping business maximize its involvement in school-to-work and with strong partnerships, everyone wins: employers, schools, students and communities."

Mimi Bushman is the Director of K-12 Education Policy for the Oregon Business Council. She is responsible for managing all of the Council's K-12 education initiatives, including work on standards, school-to-work and systemic change.

BLOCK BY BLOCK BUILDS SUCCESS

by Neil Sullivan

Boston Private Industry Council

The Boston Private Industry Council (PIC) is the intermediary organization responsible for convening Boston's emerging school-to-career system and increasing its impact in terms of student academic progress and work-based competencies as well as college and career success. To do this, the PIC maintains a relatively large staff dedicated exclusively to the placement of students at worksites and connecting experiences back to the classroom. The productivity of this staff is now measured by the "worksite learning hours" it creates. Initially expanded through School-to-Work Opportunities Act of 1994 (STWOA), the "connecting activities" staff is now funded largely by the Massachusetts state legislature through a new mechanism that provides nearly $3 million statewide to those communities able to document substantial employer participation as indicated by private sector wage commitments.

Founded in 1979, the Boston PIC predates the creation of PICs in federal law as a business-led public-private partnership overseeing the spending of federal job training money. Today, the Boston PIC plays an expanded role in workforce development as one of fifteen Regional Employment Boards established by the Massachusetts state legislature to guide the full range of workforce development efforts.

In this capacity, the PIC has chartered three 'one stop' career centers on a competitive model. The PIC's involvement in welfare-to-work will increase substantially as the local entity responsible for Boston's share of the new $3 billion allocation legislated by Congress this past summer. We are striving to apply the lessons learned as a school-to-career intermediary to both the career center and the welfare-to-work system.

In Boston, in contrast to the rest of the country, the PIC is best known as an organization dedicated to public school reform—as organizer of the Boston Compact, the city's collaborative school improvement agreement, as broker for school-business partnerships and, most recently, as convener of the city's emerging school-to-career system.

The PIC convened the first Boston Compact signing in 1982. Through the Compact, the business community committed summer jobs for public school students and priority hiring for high school graduates. The university community committed priority admissions and scholarships. Finally, the school system pledged to improve its performance as measured by better test scores, better attendance and a lower drop-out rate.

The private sector summer jobs campaign soared from a modest start of approximately 500 summer jobs to a 1990 high of 3,500, through a precipitous drop to just over 2,200 in 1991 and back up to the a high water mark of 3,915 in 1997. The key to the sheer size of this effort is the position of PIC career specialist, the person who prepares and places students with employers and remains available for problem solving once the student is on the job. The PIC career specialist does *connecting activities* with the explicit objective of securing jobs and other worksite experiences for students.

In 1991, the PIC, in collaboration with its policy partner, Jobs for the Future, took on what we now call school-to-career programs by winning a federal grant to launch a youth apprenticeship model called ProTech and by sponsoring three new National Academy programs. The signing of the third Boston Compact in early 1994, the first under Mayor Thomas Menino, committed the business community and the public schools to a large scale school-to-career system. Passage of STWOA enabled Boston to expand substantially the number of career specialists, and the PIC committed federal dollars to fund federal lead faculty positions at various high schools to promote school-to-career teaching methodologies in each school.

Due largely to its Boston Compact history, Boston had developed the worksite side of school-to-career before the approach became important to the education reform discussion within high schools. The funding of lead faculty positions created teacher ownership of an initiative that had been seen by many as a "PIC program." Just as importantly, these leadership roles remained union positions, rather than falling into the usual pattern of creating a new administrator title. Then and now the active support of teachers union president of Ed Doherty has been key.

In December of 1994, the Boston School Committee, at the urging of school committee member Bill Spring, voted to make school-to-career the lead strategy for restructuring the city's high schools. Soon thereafter, the committee voted to roll the federally-funded lead faculty positions into the next year's core school budget. This sent a strong signal that school-to-career would not be a passing fad. With the subsequent appointment of Thomas Payzant, then-Assistant Secretary of the U.S. Department of Education, as Boston's new school superintendent, school-to-career moved to the top of the Boston's education reform agenda. As one of his first acts, Payzant appointed a strong school-to-career director to lead the school side of the initiative on his behalf.

Refining the PIC's Role

Now that the Boston Public Schools have embraced school-to-career as fundamental to the school reform strategy, the challenge for the PIC as the intermediary organization can shift to cranking up the employer side of the initiative. For the first time, the demand for worksite experiences to complement new classroom practice is greater than what the PIC is currently generating. The PIC's emphasis must shift to the productivity of our career specialists and employer recruiters. We have chosen a relatively simple measure of staff productivity — worksite learning hours. This measure also serves as a way to assess employer participation on a company-by-company basis, replicating the dynamic of the summer jobs campaign with a new emphasis on structured learning experiences on the job.

As each high school restructures into interdisciplinary career pathways, schools need a more flexible approach to worksite experiences than our leading school-to-career programs offer. In fact, the intermediary role of the PIC is now understood as something other than "running programs." This is a key concept. The intermediary organization does not run programs; it provides connecting activities to the various career pathways and school-to-career programs.

We give our career specialists and employers credit for three different levels of worksite learning. An after school job or a job shadow is a good thing, even if it does not have a structured learning plan or an explicit connection back to the classroom. We are willing to give our staff and companies greater credit, however, when the supervisor on the job is pursuing a structured learning plan and evaluating student progress in one or more of the eleven competencies we developed with ProTech employers. We will grant even more credit if that structured learning experience is integrated with the curriculum in at least two of the core academic subjects back at the high school. These are the three levels of worksite learning.

We are convinced that school-to-career efforts must add distinct and measurable value if this movement is to be understood as more than excellent school reform. By measuring worksite learning hours, we are able to document for the public, the legislature and other constituencies that the investment in connecting activities can provide more learning hours during the school week and more learning days during the school year--at a fraction of the cost of extending either the school day or the school years. For example, the worksite experience adds at least ten hours of learning time per week for ProTech students and an additional 35 learning days during the summer, bringing the effective school year to 215 days.

Just as importantly, the worksite learning experience engages more adults in the teaching process in a formal way. Worksite supervisors invest time to provide the one-on-one support that students do not obtain in the school setting. Finally, the worksite experience adds new relevance to the teaching and learning process in the classroom as well as on the job. It is our belief that while applied learning is valuable for all students, it is essential for those who are not succeeding in the traditional classroom.

Even if we are convinced that the workplace holds potential as a learning place, it may be hard for some to imagine that employers will be willing to offer the number of experiences and the number of hours necessary. In order to achieve anything resembling scale, we need to be part of the company's operating budget, not just the community affairs operation. This means that we need to provide immediate value to the employer — higher productivity on the job today, not just the promise of a better workforce in the future.

In Boston, we are discovering that a structured learning plan on the job increases the productivity of both the student and the supervisor. It makes the supervision of the students more purposeful and thus more productive. Good supervisors appreciate the opportunity to make a difference in a young person's life during work hours. The worksite learning protocol is consistent with the formative performance evaluation strategies used by many companies. These factors combine to make for a highly motivated work environment.

All of this depends on good staff work. The career specialist is the glue that holds the system together, student by student. For this model to succeed in the long run, it must also have a dedicated revenue stream that lasts beyond the involvement of the school-to-career partners. Convening the partnership and measuring results, however, are not enough. Someone must do the daily work of connecting the worksite to the classroom and ensuring that students are productive on the job.

The Massachusetts connecting activities mechanism holds real potential for replication in other states and at the federal level. For instance, a dollar for dollar match from the federal government would leverage both state funds and private sector wages at an extraordinary level. This is one option for sustaining the venture capital investment Congress has made in building a national system through STWOA.

The language of the connecting activities mechanism — line items 7003-0603 in the Massachusetts state budget — codifies the basic Boston Compact concept. Business will commit resources to pay salaries and provide mentoring and instruction on the job to help employees work closely with teachers. In exchange, public funds are used to help schools and businesses work together to ensure that students serve productively on the job.

Qualifying for connecting activities funds requires "regional employment boards or other local public-private partnerships involving job commitments and worksite learning opportunities for students," and they must

document "at least a two hundred percent match in wages for students from private sector participants."

Paired with a commitment to workforce development boards, this kind of funding mechanism could make intermediary organizations a reality in communities across the country. This will determine the fate of the school-to-career initiative. Will it be the foundation of a new workforce development system and a strong national economy in the coming century? This is America's choice.

Neil Sullivan is the Executive Director of the Boston Private Industry Council. The PIC is responsible for making connections between schools and employers in order to provide integrated school- and work-based learning opportunities for Boston's young people.

WHY SCHOOL INTERMEDIARIES ARE NEEDED

by William Bloomfield
Civic Strategies/School & Main

Is there a role for intermediary organizations in school-to-work? What a silly question. Of course there is...but what is appropriate? At School & Main, we have a couple of ideas.

School & Main is a national nonprofit organization that designs, tests and manages community-based, business-led and school reform initiatives that improve education and career opportunities for children and youth--making it possible for young people to successfully transition into adulthood. Since 1985, we have worked with corporations, philanthropies, school districts, government and local community development organizations to create national school-to-career models in more than 30 states; helped communities build effective partnerships; and used results oriented professional development to train thousands of professionals, doctors, youth workers, employers and nonprofit managers. School & Main began as an applied research center at Brandeis University's Heller Graduate School and for the past four years has been a community education department of the New England Medical Center, the teaching hospital for Tufts University's Medical School.

School & Main has developed and managed three national capacity building initiatives: Career Beginnings, Futures 2000 and Higher Ground, each of which have undergone rigorous third-party evaluations. Together they have enabled more than 30,000 middle grade, high school and college students to successfully complete their education and transition to further education and careers. In addition to the measurable youth outcomes, over the past 30 years more than 20,000 adult volunteer mentors have helped disadvantaged students gain the confidence to decide their own futures. Through our national and regional institutes, practitioners have taken our cutting-edge courses on partnership development, workforce preparation, school-to-career strategies, education reform and community collaboration. Presently, we serve as a national technical assistance provider for school-to-work, focusing on partnership development, community leadership and business involvement.

The Role of Intermediaries in School-to-Work

The School-to-Work Opportunities Act of 1994 is a powerful vehicle with which to mobilize "partnerships which are dedicated to linking the worlds of school and work among secondary and postsecondary educational institutions, private and public employers, organized labor, government, community-based organizations, parents, students and local education, training and human service agencies."

Sound familiar? For the past 20 years, the policy community has talked about the need for community partnerships to lead local systemic change efforts. A great deal of energy and resources has been spent to encourage business to take more direct responsibility for improving their community's education and school-to-career results as a key partner along with schools, higher education, community agencies and government. A few years ago The Council for Aid to Education reported what many people knew, but were too polite to say out-loud: "few business and education community partnerships have delivered substantially

better and measurable results, and there is little understanding of the process necessary to do so."

Communities know what they'd like to see happen but they do not know how to get their collective act together to get school-to-work systems up and running. It is more than a question of community awareness or willingness, although we have enough evidence to know that declarations of support in public meetings are not enough to get key people to work together. The deeper issue is not what private and public sector community leaders say (and probably believe) about collaboration and change, but whether they are geared to engage large numbers of employers, public educators, colleges, governments, nonprofits, parents and students in this massive educational restructuring effort called school-to-work. By and large, the answer is no.

In community after community, even the most trusting individuals know that the road from here to there is full of potholes and land mines, and because of discomfiting experiences in the past most of the time people never get past the first roadblock. They run into a wall and do not ask the right people for help. From a personal perspective, would you sign an important contract without legal advice? Without professional advice it is very hard to create community-wide partnerships, yet many communities and school-to-work efforts still try to start on their own without a map or without someone who knows how to drive. Maybe we need super-glue to keep the bureaucratic educators and hierarchial public officials at the table with business leaders long enough to recognize that school-to-work can work if their institutions will be accountable and responsible to each other and the community. Most communities need help in this regard.

Is there an important role for intermediaries? You bet there is. In fact, there are two things that national and local intermediary organizations can and should do with communities early on. The first and maybe fundamental role is figuring out how to help disparate organizations transform their idealized school-to-work vision into everyday reality for young people, teachers, employers and families, which is where the "rubber hits the road." To make the vision real, local partners must join with one another to consider, define and agree on the community's education and workforce development priorities (which may conflict with institutional self interest), make joint decisions as colleagues, hold each other accountable for the results of their decisions and follow-through on the agreements they made to each other and the community-at-large. Most community leaders believe they have already done this (as if it is a one-time event or a grant program), but they are kidding themselves. Putting the time in to work through the issues to create a new education and training delivery system takes more than a one-hour breakfast meeting and it requires that the collective leadership, not their staff, make informed decisions. To build a legitimate system, all community leaders need to put institutional interests aside and craft a set of relationships with people they have probably never (1) been in a room with before, (2) seriously talked with, (3) negotiated with over turf and resources, (4) respected or treated as peers and (5) resolved issues with and planned next steps together as partners. If that is not enough, the really tough part is getting top leaders to realize that they need help "walking the walk" before they get frustrated by the slow planning and implementation processes. Of course, if the meeting agendas cover topics that promote authentic dialogue versus staff reports and minutes, then it is more likely that community leaders will look forward to this work because it is real and they will be accomplishing something. One caution: this will be a very different interaction for everyone — they will probably find it threatening and odd at first — so it requires careful preparation before anyone sits down together. Outside intermediaries will have a better chance of getting this process started than local staff or the partners.

The second task is more concrete. Most school-to-work partnerships need serious technical assistance to revise and "re-engineer" curriculum, change teacher/employer preparation and improve classroom instruction and work-based learning sites in the community. Most partnerships also need help negotiating school and industry responsibilities so that when the partners realign their respective organizations they are ready and able to operate a new delivery system that is coherent and provides comprehensive services. This in turn operationalizes the school-to-work vision and, in theory, creates systemic change.

So how tough is this to do? Think about it. How many people do you know who run or work in organization who would look forward to altering internal and external lines of authority, sharing power with others, blurring the political and geographic boundaries between different institutions and changing the way they get their work done? At a minimum it is heresy to staff and executives in most organizations. Machiavelli taught us to avoid this behavior at all costs or, if it is unavoidable, manipulate the situation as best we can. We all know leaders and managers who learned those lessons well. Looking at it more optimistically, John Gardner wrote that most people do not break habits by setting out to do so. Instead, they change when something better comes along. Intermediaries can play a critical role in getting diverse organizations and strong leaders past the early clashes over power and turf, decisionmaking, management theory, organizing procedures and the like. As neutral outsiders, intermediaries are better able to prime the collaborative pump and provide the motivation and support that communities serious about change will need to succeed.

As the process unfolds the question becomes: how much should the intermediary do to lower institutional resistance and remove the inevitable political, organizational and personal barriers that develop? Is it up to the intermediary to keep everyone happy and save the day? In our enthusiasm for ideas and our optimism about human behavior, we frequently make the mistake of forgetting that local change is up to the people who live there. In the short-term, a skillful intermediary may be able to convince the people to break with the habits of the past and behave differently. But when it is all said and done, no matter how skillful and clever the intermediary, they can not make people do something they do not want to do. Economist Herbert Stein once said, "if something is unsustainable, it tends to stop." Intermediaries only add value when they assist school-to-work collaborations in becoming sustainable and producing better results for kids. The nation does not need any more one- or two-year fads.

Another critical role intermediaries should play (but most do not) is that of truth-telling. Because intermediaries have a perspective that the participants can never have, it is their responsibility to point out to the partners when the community is not ready or able to take on a system-change agenda, or if leaders or staff do not have the attitude or capacity to get the job done. At the risk of losing a client, it is the task of the intermediary to know "what time it is," when to hold people's feet to the fire, when to let the "pot simmer" for a while and, in the words of country singer Kenny Rogers, "when to fold 'em and walk away."

Choosing National or Local Intermediaries

Do communities gain any advantage by working with national intermediaries versus local ones? It depends on the community's needs. The selection criteria should not be where the intermediaries live or what they charge but whether they have the range of experience necessary and a successful track record.

The seriousness of the task should drive selection. Advising community leaders about building a new school-to-career system is, in effect, a permission to raid the candy jar.

Intermediaries get to invite new decisionmakers into the circle to dismantle existing programs and turn institutional relationships upside-down. It is not trifling. Lest we forget, school-to-work is supposed to change the way resources are allotted ("who gets what") alter the job responsibilities of teachers and administrators, convince business to keep the faith in the public schools, suggest to parents that their son or daughter does not necessarily need a college education and try out new curricula and assessments on kids without knowing whether any of it will work. Folks have lost their jobs suggesting changes that were much more innocent. A lot is at stake for the community and the professionals whose lives will be effected by this legislation.

The intermediary role requires precise, time-sensitive and tactful craftsmanship so as not to create dependence, fear, suspicion or hostility among the partners and other key stakeholders as reality sinks in. Each community has unique needs and different players which make feel-good facilitation and "shrink wrapped" programs fairly ineffective. The challenge is to support key leaders as they develop the collective trust and confidence needed to make long-term decisions together, not delay action with "safe" discussions that do not address central issues. A parallel challenge is to build the capacity of the group so that they do not default to their traditional ways of doing business when the going gets tough, which is a constant problem.
Local school-to-work partnerships need experienced professionals with an unusual assortment of communication, process and content skills, whether they live locally or 2,000 miles away. Therefore, it is crucial that the intermediary role not be filled by a newly minted graduate, goofy facilitators, researchers or policy wonks. No one wants to work with Attila the Hun, but it is less important that the intermediary is warm and cuddly than that it understands how to manage groups in conflict and move an agenda forward. Getting beyond business as usual can not be accomplished by putting people in a room to "bond" by writing mission statements or going through content-free facilitated exercises. It takes a tough-minded exchange of views with the right people in the room. Communities can not afford a misstep when these discussions are taking place. The good intermediaries know how to position the process and create an environment in which change is possible. The rest is up to the folks who live there.

Ingredients for Success

Intermediaries have terrific opportunities to help employers, educators, agency staff and community activists stick their necks out, learn new ways to work together and gain the motivation and trust needed to act on their convictions and plans. The following points guide the work of the best intermediaries:

- they are not seduced by theory or their own propaganda, they are not pompous or academic and they are not indecisive touchy-feely types;
- they are willing to pitch in and get their hands dirty when necessary, they will not get discouraged at resistance and political gamesmanship and they will not walk away when the heat gets turned up;
- they have the savvy to separate rhetoric from reality and convincingly say so out loud;
- they have the credibility to suggest and implement benchmarks, feedback mechanisms and early warning systems that work for the community;
- they are willing to take responsibility for bad results and avoid the "blame game" while holding everyone to their own commitments — they do not need to take credit when good things happen;
- they have the patience and capacity to serve several "masters" at the same time without compromising the process or losing sight of the goal;
- they know when to bring the process to closure by asking the right question when it looks like success is in sight or when everyone's best effort is failing; and

- they know when to increase or decrease their own activity to get the desired outcomes — and they know when to withdraw and let the community run with the ball on their own.

Some communities will have an easier time with this than others, with or without an intermediary. It is not all going to go as smoothly as one wishes, but it probably will not take as long or be as nearly as painful as some people imagine. Most importantly, if we focus on the intent of the legislation — to change the educational pipeline status quo and improve the school-to-work transition for children and youth — then perhaps all the maddening hurdles and continuing dilemmas faced by communities across the country as they learn how to build a new system will be easier to endure.

William Bloomfield is the Executive Director of Civic Strategies/School & Main. School & Main is a national intermediary organization which has helped communities in more than 30 states develop and implement school-to-work.

AMERICAN YOUTH POLICY FORUM *RESOURCES THAT WILL WORK FOR YOU!*

The Forgotten Half Revisited: **180 pages. $15 softcover prepaid.**
American Youth and Young Families, 1988-2008

A ten-year update of the 1988 reports of the William T. Grant Foundation Commission on Work, Family and Citizenship. Includes essays and the latest data on a range of topics — employment, youth and community development, school reform, higher education, service — by a number of the nation's leading scholars and youth policy advocates. Essayists include Thomas Bailey and Vanessa Smith Morest (Teachers College, Columbia University), Martin Blank (Institute for Educational Leadership), Carol Emig (Child Trends), Lawrence Gladieux and Watson Scott Swail (The College Board), Samuel Halperin (American Youth Policy Forum), Harold Howe II (former U.S. Commissioner of Education), John F. Jennings and Diane Stark Rentner (Center on Education Policy), Karen Pittman and Merita Irby (International Youth Foundation), Shirley Sagawa (Learning First Alliance), Carol Steinbach (The Citistates Group) and Daniel Yankelovich (Public Agenda).

Exploring Systems for Comprehensive Youth Employment Preparation **64 pages. $6 prepaid.**
in Switzerland, Austria and Germany: Impressions from a Study Mission

Glenda Partee, editor

Summarizes the observations of a group of Congressional policy aides and senior U.S. civil servants in the field of education and training for employment as they examined systems of youth employment preparation in the three countries.

A Young Person's Guide to Earning and Learning: **28 pages. $2 prepaid.**
Preparing for College, Preparing for Careers

by John F. Jennings and Diane Stark Rentner

An easy-to-use source for young people trying to make sense of a complex education, training and employment system. (Co-published with Center on Education Policy)

A Young Person's Guide to Managing Money **36 pages. $3 prepaid.**

by Harriet Tyson

A quick, easy-to-read reference for some pressing issues of money management. Key areas covered include savings and checking accounts, credit cards and borrowing, health insurance, budgeting, paying bills, paying taxes and living independently.

Some Things DO Make a Difference for Youth: A Compendium of Evaluations of **196 pages. $10 prepaid.**
Youth Programs and Practices

Donna Walker James, editor

Summarizes 69 evaluations of youth interventions involving mentoring, employment and training, education and youth development areas for policymakers and program practitioners.

MORE Things That DO Make a Difference for Youth **$10 prepaid.**

Donna Walker James, editor

Volume II of a compendium of evaluations of youth programs. Summarizes more than 50 initiatives on school-to-work, vocational education, Tech Prep, school reform, juvenile justice and other areas of youth policy. (Available in January, 1999)

Youth Work, Youth Development and the Transition from Schooling to Employment in **72 pages. $5 prepaid.**
England: Impressions from a Study Mission

by Glenda Partee

Summarizes the observations of an 18-member U.S. delegation of federal and state policy aides, researchers, program practitioners and representatives of non-profit and youth serving national organizations about policies and practices in England to reform the education system, support youth work and the delivery of services, and prepare youth for the workplace.

Preparing Youth for the Information Age: A Federal Role for the 21st Century **64 pages. $5 prepaid.**

by Patricia W. McNeil

The author argues for high expectations for all students, offers a compelling vision of a high school "redesigned for success" and outlines strategies to support youth in their learning. Offers insights into issues such as developing state and local consensus on results, improving accountability at the state and local level and improving school quality.

Revitalizing High Schools: What the School-to-Career Movement Can Contribute **38 pages. $5 prepaid.**

by Susan Goldberger and Richard Kazis

The authors argue that school-to-career must be an integral part of high school reform strategy if it is to achieve scale and be of maximum benefit to young people, employers, and educators.
(Co-published with Jobs for the Future and National Association of Secondary School Principals)

Opening Career Paths for Youth: What Can Be Done? Who Can Do It? **16 pages. $2 prepaid.**

by Stephen F. and Mary Agnes Hamilton

The directors of Cornell University's Youth Apprenticeship Demonstration Project share practical lessons in implementing essential components of school-to-career programs.

Prevention or Pork? A Hard-Headed Look at Youth-Oriented Anti-Crime Programs **48 pages. $5 prepaid.**

by Richard A. Mendel

Surveys what is known about the effectiveness of youth crime prevention programs. What works and what does not?

The American School-to-Career Movement: A Background Paper for Policymakers — 28 pages. $5 prepaid.
by Richard A. Mendel
Interviews and analysis of current efforts to link schooling and the world of employment; essential tasks to be addressed by each of the social partners in the community.

Dollars and Sense: Diverse Perspectives on Block Grants and the Personal Responsibility Act — 80 pages. $5 prepaid.
Eleven authors offer a wide spectrum of opinion on improving efforts to promote support for children and families.
(Co-published with The Finance Project and the Institute for Educational Leadership)

Contract With America's Youth: Toward a National Youth Development Agenda — 64 pages. $5 prepaid.
Twenty-five authors ask what must be done to promote youth development, supportive communities and youth services.
(Co-published with Center for Youth Development and the National Assembly)

Improving the Transition from School to Work in the United States — 40 pages. $5 prepaid.
by Richard Kazis, with a memorandum on the Youth Transition by Paul Barton
A detailed analysis of the transition of American youth from school to employment. Offers strategies for improving career preparation and recommendations for federal policy.
(Co-published with Jobs for the Future)

Youth Apprenticeship in America: Guidelines for Building an Effective System — 90 pages. $5 prepaid.
Discussion of educational theory and practical application by six experts at the forefront of research and on the front lines in implementing youth apprenticeship. Outlines approaches and lessons learned from experience in the U.S. and abroad.

Children, Families and Communities: Early Lessons From a New Approach to Social Services — 48 pages. $5 prepaid
by Joan Wynn, Sheila M. Merry and Patricia G. Berg
Offers both a big-picture analysis of comprehensive, community-based initiatives and a more focused look through the lens of one such initiative in eight Chicago neighborhoods.

What It Takes: Structuring Interagency Partnerships to Connect Children and Families with Comprehensive Services — 56 pages. $3 prepaid.
by Atelia Melaville with Martin Blank
Guidance for schools, social welfare agencies and CBOs on how to advance the well-being of children and families.

ORDER FORM (Cut Out or Photocopy)

Name _____

Address _____

City _____ **State** _____ **Zip** _____

QUANTITY		PRICE	AMOUNT
___	The Forgotten Half Revisited (softcover)	$15.00	_____
___	Youth Employment Preparation in Europe	$6.00	_____
___	A Young Person's Guide to Earning and Learning	$2.00	_____
___	A Young Person's Guide to Managing Money	$3.00	_____
___	Some Things DO Make a Difference for Youth	$10.00	_____
___	MORE Things That DO Make a Difference for Youth	$10.00	_____
___	Set of both Make a Difference Volumes	$17.50	_____
___	Youth Work, Youth Development in England	$5.00	_____
___	Preparing Youth for the Information Age	$5.00	_____
___	Revitalizing High Schools	$5.00	_____
___	Opening Career Paths for Youth	$2.00	_____
___	Prevention or Pork? Youth-Oriented Anti-Crime Programs	$5.00	_____
___	American School-to-Career Movement	$5.00	_____
___	Dollars and Sense	$5.00	_____
___	Contract with America's Youth	$5.00	_____
___	Improving the Transition from School to Work	$5.00	_____
___	Youth Apprenticeship in America	$5.00	_____
___	Children, Families and Communities	$5.00	_____
___	What It Takes	$3.00	_____

TOTAL $_____

PREPAID ORDERS ONLY, PLEASE. Send all orders to: AMERICAN YOUTH POLICY FORUM, 1836 Jefferson Place, NW, Washington, DC 20036-2505 (Federal ID 31-1576455). Call (202) 775-9731 for rates on bulk orders.

BEST COPY AVAILABLE

ISBN: 1-887031-61-8